AVICULTURAL MAGAZINE

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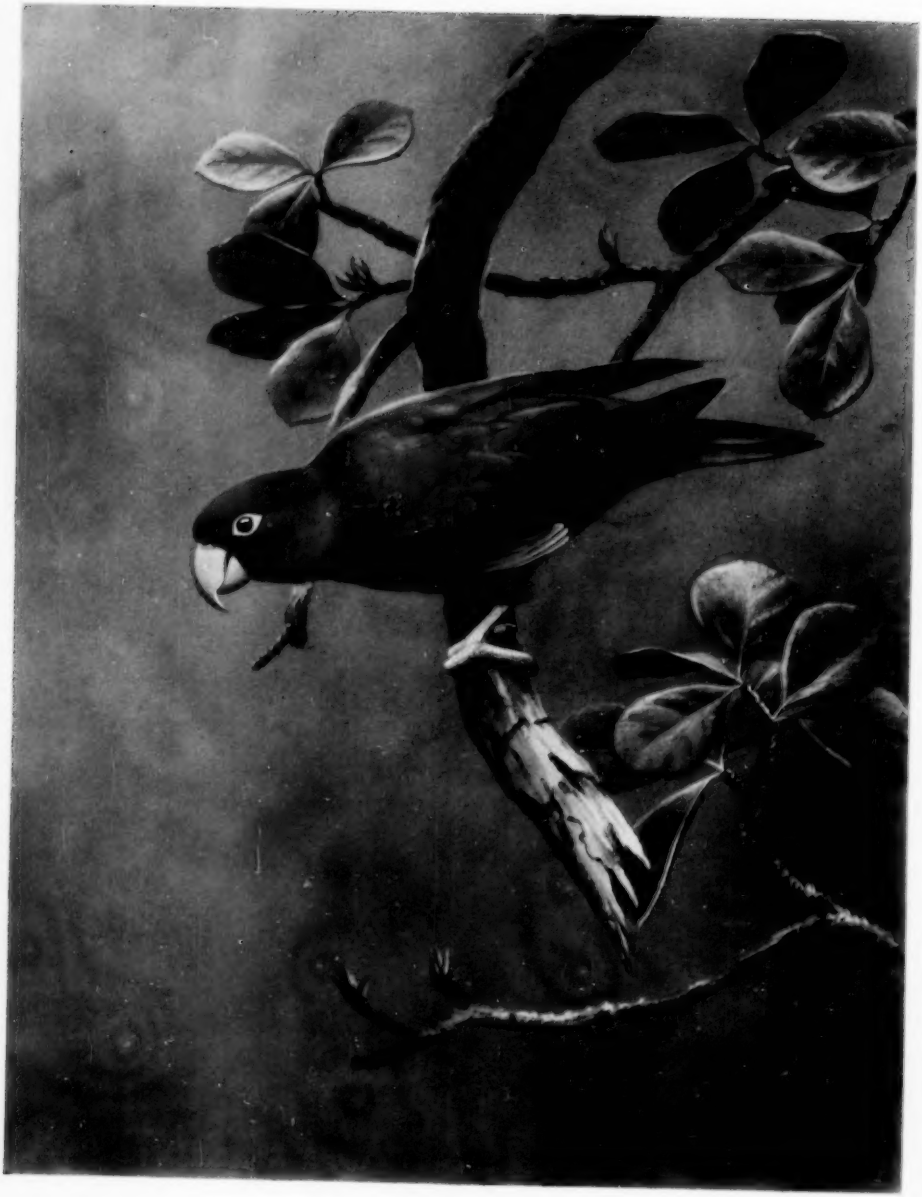

Golden-winged Parrakeet.

AVICULTURAL MAGAZINE

THE JOURNAL OF THE AVICULTURAL SOCIETY
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GOLDEN-WINGED PARRAKEET

(*Brotogeris chrysopterus chrysopterus*)

By A. A. PRESTWICH (Southgate, England)

The genus *Brotogeris*, according to Peters (1937), contains seven species with eight subspecies. Of immediate interest is *B. chrysopterus* with three races :

Brotogeris chrysopterus chrysopterus (Linnaeus).
Golden-winged Parrakeet.

Brotogeris chrysopterus tuipara (Gmelin).
Tuipara or Golden-fronted Parrakeet.

Brotogeris chrysopterus chrysosema Sclater.
Golden Parrakeet.

Friedmann (1948) has since described a fourth race, *B. c. tenuifrons*, Rio Negro Parrakeet, which appears to be intermediate between *B. c. chrysopterus* and *B. c. tuipara*.

Distribution. The range of *B. c. chrysopterus* is " Eastern Venezuela and the Guianas, south to the north bank of the lower Amazon ", and of *B. c. tuipara*, with which in the past it has so often been confused, " South bank of the lower Amazon from the Tapajóz to Pará, and through the coastal forest belt to north-eastern Maranhão " (Peters).

There is considerable variation in size in the species of the genus *Brotogeris* ; the largest being the well-known All-green Parrakeet (*B. tirica*) 10·0 inches, whereas the smallest are the Tui (*B. st. thoma st. thoma*) and the Golden-winged (*B. c. chrysopterus*), both 6·8 inches.

In 1758 Edwards (1760) painted a parrakeet which he says had been " the property of one of the Lords of the Admiralty, and was given to me by a servant after it died ". He believed it had not hitherto been figured or described and applied the names " Golden-winged Parrakeet ", " La Perrique aux Ailes d'Or ", and " *Psittacus minor alis aureis* ". The plate is satisfactory apart from the fact that it by no means does justice to the fine golden-orange primary-coverts.

Brisson (1760) is the next to notice this species, giving descriptions in French and Latin, presumably based on Edwards.

The present specific name was bestowed by Linnaeus in 1766, when he named it *Psittacus chrysopterus*, at the same time wrongly giving its habitat as India. From then onwards most of the late eighteenth and early nineteenth century ornithologists included the species in their works—their observations, however, all too often merely being repeated from Edwards.

Buffon (1779) calls it " La Perruche aux ailes d'or " and gives due credit to Edwards, but otherwise says nothing of importance : Latham (1781, 1790, 1822) gives condensed versions of Edwards : Levaillant (1801) includes two plates of " La Perruche à tache souci ", male and female ; that of the male is quite good, but the female, here stated to lack the orange wing patch is, of course, depicted without, also the under wing-coverts are shown as of a brightish blue and the two central tail feathers as blue—this last also applies to the plate of the male ; Levaillant tells us it is very common in Cayenne, and that large numbers are sent to Europe, he thinks it the more surprising therefore that the species is disregarded by ornithologists : Shaw (1812) gives credit to and relies on Edwards : Vieillot (1817, 1823) does likewise : Kuhl (1820) can do no better than give a description and name five museums possessing skins of *Psittacus Sosove* : Swainson (1820–21) gives a small, inferior plate of *Psittacus Cayennensis*, Cayenne Golden-winged Parakeet, and quotes Levaillant that the female is entirely green : Lesson (1831), " Psittacule a tache souci," and Wagler (1832), *Sittace tuipara*, jun., add little or nothing of importance.

Dr. Finsch (1868) regarded *B. chrysopterus* merely as the juvenile of *B. tuipara*. In 1878, however, the Zoological Society of London received a living *chrysopterus*, followed in 1879 by a *tuipara*. Sclater (1879) was then able to show beyond doubt that the two were subspecifically distinct. There is a marked similarity, but *chrysopterus* differs from *tuipara* in having a narrow frontal magin and chin-spot of dark brown instead of orange ; it is also somewhat smaller. The female is similar to the male ; immature the primary-coverts are said to be green.

Very little appears to have been written on the wild life of this Parrakeet. Schomburgk (1848) states it is to be found throughout British Guiana. It flies about near the coast in large flocks, and is very fond of settling on the flowering *Erythrina* trees growing in the coffee plantations, and greedily eating the flowers. Its nest is in the holes of trees, and two to four eggs are said to form the clutch.

Lloyd (1895), *Some Guiana Parrots*, gives a note which may or may not apply : " Several species of *Brotogeris* are also reported from the colony, but they are small green birds hardly distinguishable from each other except in size, and not very interesting from the æsthetic

point of view. They generally lay their eggs in the deserted nests of wood ants (termites)."

This is a rarely imported species, practically unknown to aviculturists. It has been represented in the collection of the Zoological Society of London on at least two occasions. The first was received in exchange in April, 1878, and a second by purchase in November, 1888, since when there have probably been others. Thorough search has failed to reveal the names of any private aviculturists who have owned the Golden-winged.

The coloured plate is from a painting by D. M. Reid-Henry of one of four examples lately in the "*Darenth-Hulme*" collection. They arrived at the end of October, 1952, and were apparently the sole survivors of a large number shipped by a very inexperienced trader in the same case as several Amazon Parrots.

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THE NESTING OF THE MALACHITE SUNBIRD

By SYDNEY PORTER (Derby, England)

Searching through avicultural literature one finds little or no reference to the nesting of Sunbirds in captivity, except for a single instance in 1912 when a pair of Purple Sunbirds nested in the aviaries of a Mr. Brook, at Hoddam Castle, in Scotland. This nesting was unsuccessful as the eggs were infertile.

Possibly one of the main reasons why no attempt was made to induce the birds to reproduce themselves was that in pre-war days (before 1940) few hens were imported compared to the number of males. Being such small, modest, and inconspicuous creatures, so utterly different to their gorgeous mates, importers had not bothered to bring them into the country.

Now a good many pairs of Sunbirds are imported by sailors on Merchant Navy ships, who find that a few pairs brought over at a time prove a lucrative business. In this way quite a few rare species are to be picked up if one knows the contacts.

Unfortunately some of the men finding that the birds will survive on honey alone, use this without bothering about the usual sunbird nectar mixture, it being less trouble, and though the birds may arrive in good condition, not many survive more than a few weeks after importation.

A sailor with ideas of getting rich quickly brought over (or at least tried to) 50 Malachite cocks in a single cage . . . when I saw the few which eventually reached these shores they looked like animated bits of oily rags . . . After a week or two only one poor thing survived and lived for over a year, during which time every effort was made to aid its recovery, but in vain.

In the old days most people seemed to think these birds frail and delicate creatures needing a high temperature and much care. Actually few birds are easier to keep if certain rules are kept, and few are longer lived.

Since I found a way to propagate large quantities of small flies, I thought there would be little difficulty in getting Sunbirds to reproduce themselves. With that object in view a small range of aviaries was built with warmed inner shelters . . . but alas for the weakness of human nature, before the Sunbirds arrived on the scene the aviaries were inhabited by other species. However, two aviaries were set aside in the end for their intended inmates, a pair of Malachites and a pair of Amethysts.

As usual, the males treated their mates with the brutality which seems inherent in the nature of male Sunbirds. The hens were chased, chided, bullied, and beaten, and many times I have had to

rescue them from imminent death. At first a few flight feathers of the males' wings were clipped but this made no difference. When the flights were heavily cut the males would stand by the food pots and keep their mates from feeding. Even putting two food receptacles in made little difference, as the males sprang from one to another. If this failed they would take up a stance by the opening between the outside and inside of aviary and shelter and keep the hens outside. Many times the little hen Malachite would hide under the newspapers which covered the floor of the aviary shelter to get away from her wrathful spouse. Often she would come up to me and indicate that she wanted to feed, and I had to wait with her mate perched a foot or two away, his body quivering with rage all the while, only to knock her down as soon as I left.

The cock Amethyst would chase his mate around the outside aviary with such rapidity that one only saw a misty circle, so terrific was their speed. After this had gone on for what seemed an endless time the hen would drop on to the ground exhausted, when she would be seized upon and nearly buffeted to death.

When the males cannot catch their mates they set up an extremely loud shrill and scolding chatter during the whole of daylight. This is apt to be very fraying to one's nerves. Fortunately my aviaries are far enough away from the house so that one can't hear them. At last the pairs had to be separated, as it seemed that nothing would deter the males from eventually killing the hens.

The male Malachite is one of the few Sunbirds which goes into an eclipse plumage out of the breeding season. He moults his brilliant livery and takes on a dress very similar to the hen except he retains his long tail and has some green on the wing-coverts. When he returns to his nuptial plumage there seems to be no moult. I have kept many males in cages during the transition time and not a single feather has been dropped.

Gradually the shining, metallic green spreads over the whole of the plumage. When handled there is no sign of the greyish feathers with which the bird has been clothed. One can only assume that there is a colour change in the feathers as there most certainly is with Delamere's Giant Whydah, for one can see the black pigment passing up the shaft of the feathers and gradually diffusing over the whole of the feather.

When the male bird had assumed his breeding plumage and begun displaying the hen was put back into his aviary, when he at once went into an ecstatic and frenzied display, but in between this exhibition he still chivvied her. The display of the Malachite Sunbird is rather ludicrous ; after dashing about at an incredible speed he takes up an attitude rather reminiscent of the postures created by the Victorian taxidermists when they fashioned their " stuffed " birds, which under

a glass shade were the ornaments of the drawing-room of that age. The head is thrown back with the long bill at right-angles to the back, the tail is also raised parallel to the bill, and the wings held out from the body though not spread. The long tail is swung like the pendulum of a metronome, with the same clockwork rhythm. During this time the bird pours out a very loud, sweet song very much like that of a Wren and equally out of proportion with the size of the bird. During this period, though not always, the brilliant yellow pectoral plumes, normally concealed, are brought into view and spread like two fans on each side of the breast. This posing attitude is assumed many hundreds of times throughout the day.

During the courtship the little hen would pluck up courage to beg her mate to feed her, but I have never seen him do so, he usually drives her away. As the season advanced she seemed less frightened of him.

At the beginning of May the hen was observed to be carrying bits of fibre in her beak, and one day I noticed what appeared to be the nucleus of a nest in a clipped privet bush about 3 feet from the ground. There were a few fibres and dead leaves placed vertically in an opening about in the middle of the bush. Various upholsterer's materials were procured . . . coconut fibre, short black horse hair (if given in long lengths birds usually hang themselves with this), cotton wool, down, lint, wadding, and the fine black hair-like roots of maidenhair fern which the gardener was then repotting ; but what pleased the bird most was kapoc, the beautiful silky down from the seed pods of an African tree which the birds no doubt use in a natural state.

The hen went into an ecstacy of joy when this was put in the aviary and upon seizing pieces she flew round and round in mad delight, letting bits go and then darting after them again and chasing pieces blown about by the wind. After the first frenzied delight died away she commenced with tremendous energy to build the nest and at intervals of from 10 to 20 seconds took alternate bits of kapoc and fern root or fibre to the nest. She seemed to do no weaving or building in the ordinary sense but her manner of work seemed to be a vigorous " tucking-in " of the materials. At first a solid structure about the size and shape of a pint basin on its side was made, there being no shape or indication that it was to be a nest. Eventually, as the hen worked on, an opening appeared in the middle, and in time the nest became a large sausage-shaped structure with a hole at one end, and when completed in about a fortnight's time it had a kind of porch over the entrance and what might be described as a long " beard " below, a mixture of kapoc, coconut fibre and fine dried grass and fern root.

On putting my finger into the entrance hole I found the nest was

pouch shaped inside and beautifully warm and downy. This nest was rather loose in composition as the birds had not enough cobwebs to bind it together on the outside as they do in a wild state. I tried to gather cobwebs, but this was a difficult task as it was early in the season. A kind friend said I could go and gather cobwebs from one of his outbuildings, in which there were a great many. So, armed with little forks cut from bamboo bushes, I collected a great many. Alas, these were old and dusty and when concentrated after the collection, they appeared very black, and the hen refused to have anything to do with them. Fearing that if we had a downpour of rain the nest might become waterlogged, I took the precaution of putting a very large sheet of plate glass over the part of the aviary where the nest was. This was a good thing, for one night after the hen had been sitting about a week or more we had a very heavy downpour which lasted about twelve hours, and had the nest not been protected it would have collapsed. This made one realize what a wise precaution the binding together of the nest with cobwebs is, as this not only holds the structure together but also makes a waterproof covering. The silk used in Africa by Sunbirds comes from huge spiders' webs and is much stronger and thicker than any found in this country. In fact a few dozen strands twisted together are almost impossible to break.

No Sunbird's nest I saw in Southern Africa was anything like the one made by my bird. They were usually purse shaped structures hung by a rope of spiders' web from the ends of branches at a good height, stuck over with dead leaves, moss, and lichen, and often ornamented with paper or bits of cloth. One I found was trimmed with bits of fine lace the bird had collected from a veranda where the farmer's wife did needlework.

The male Malachite took not the slightest interest in the nest building and always ignored the hen's requests for food. By the demeanour of the hen and her " pregnant " look, I thought an egg was laid on the night of 24th May and another on the night of 26th May, which is the normal clutch. But one day, when the pair were both in the inner shelter where the food is kept, I ventured to put my finger in the nest and found there was only one egg. Of course, owing to the shape of the nest, it was quite impossible to see the egg, and to have got it out would have meant seriously damaging the structure. However, even in a wild state sometimes only one egg is laid. This must indicate that this Sunbird has few if any natural enemies, and is not to be wondered at as few birds have a swifter flight. The cock seems to fly at a prodigious speed and in a way resembles a great, green dragon fly ; in fact when trying to catch this bird in an aviary this resemblance seems very real, especially as the wings make almost the same heavy buzzing as a dragon fly does when it has flown into a room and is trying to escape.

Though about 10 inches long the contour of the male is so elegant and beautifully streamlined that it could be passed through a large finger ring ; I can think of no other bird so beautifully sleek and slim, but this is only when it is in perfect health.

There are several other species of Sunbirds found in Kenya, but they lack the beauty of the South African bird. They are darker in colour and lack the beautiful golden scintillation and very trim shape, this is mainly because the tails are longer and not stiff like the other bird, in fact some have the central tail feathers almost as long and flexible as those of the Pin-tailed Whydah when in nuptial plumage.

About the food on which my Sunbirds are fed ; there have been many nectar mixtures advocated but one evolved by my friend Mr. Fred Logan, of Nottingham, seems to be the best, and on this food I have never lost a Sunbird except through accident. In regard to this food, for the morning mixture I mix two teaspoons each of Mellin's and Horlick's Food into a paste with water, then add two dessert-spoons of pure *English* honey (this is most essential as imported honey has preservatives in it which are harmful to the birds), a small portion of " Yeastrel " or Marmite about the size of a small pea, and this is dissolved in a pint of hot water ; when the mixture has gone cool a few drops of " Abidec " are added. For the afternoon mixture one dissolves in a pint of hot water two dessert-spoons of Nestle's Milk (Sweetened), two teaspoons of Mellin's Food, and one dessert-spoon of English honey. Larger quantities can be made and kept in a refrigerator and fed to the birds as wanted, but it must have the chill taken off before it is put in the cages or aviaries. My birds have flourished exceedingly since I used this mixture, and quite a few have shown signs of nesting. When in an outdoor aviary (with a heated shelter) I find live food of great benefit. This is produced by taking old buckets and half filling with rotten fruit, banana skins, grapefruit peel, etc., and fish heads, and covering the bucket with wire netting. Soon one has a constant supply of small and large flies ; needless to say my aviaries are not near the house. Once I used to hang small all-wire cages up in the aviaries with fish heads in them, but the birds used to put their long bills through the wire and with their long tongues lick these unsavoury objects, so I thought it better to substitute the buckets. I have tried to breed fruit flies for some of my Sunbirds which are in cages in the birdroom, but this has never been successful.

After the egg was laid I searched through all the ornithological literature in my library on the birds of South Africa, especially the *Monograph of the Sunbirds*, but there is no mention of the incubation period. Perhaps this is not to be wondered at as the eggs, owing to the structure of the nest, are not visible to the ordinary onlooker, and it would be very difficult to find out just when the young had

hatched, both from the shape of the nest and the position it was in. The nearest I could find was 12 days for Zosterops which are supposed to be allied to the Sunbirds.

The little hen sat steadily and was not frightened off the nest by anyone approaching, though she was usually off to greet me when the morning food was taken round.

The cock took up his stance in some branches above the nest, which is probably a natural thing for him to do in a wild state, to drive off enemies or to give warning to the hen on the approach of danger. He was very annoyed when she left the nest for any time, and tried to drive her back. At the approach of anyone, even a stranger, she never came off the nest, but just put her head out of the entrance hole, though only the end of the long curved beak was visible owing to presence of the porch above the opening, and the nest only being about three feet high, but she saw all that went on.

By giving two extra days to that of the incubation of the Zosterops, the egg should have hatched on 9th June. From that date until the 12th the hen seemed restless and came off the nest more frequently. On the 12th, before setting off for the day to the Chester Zoo with Mrs. Belle Benchley, of the San Diego Zoo, who was then my guest, I felt in the nest and found the egg stuck to the bottom. What caused this I do not know, whether it was the excess of moisture or the bird having been " taken short " in the nest, I don't know. However, I took the egg out and broke it and found a fully-developed young one inside, but dead.

During the first two weeks of that June (1954) we had the wettest weather on record during that period for fifty years. The meteorological authorities said that sometimes an inch of rain fell in a night ; not being very well up in the mathematics of the M.O. I would not like to dispute this, but judging by otherwise empty buckets which seemed to have about half-filled during the night, I should have said at least 6 inches had fallen ! Whether it was the cold or dampness that caused the young one to die I don't know.

Of course the hen seemed rather lost when she found her egg gone, but by the 14th she was lining her nest with clipped downy duck feathers ; this was unusual as she previously lined it with kapoc.

From the look of the bird it appeared that an egg was laid on the 17th, when I left home for the Avicultural Conference in London.

Arriving back on the Sunday I had rather a shock on seeing the hen. She looked dejected and utterly exhausted and made no movement when I went to pick her up. In fact she did not move at all for several hours. Wondering if this was due to her laying another egg, I felt in the nest and found that there were two eggs there. By late evening she was back on the nest again and in the morning seemed quite her usual self.

The hen sat steadily for fifteen days when I knew there must be something wrong, so I took the eggs out and broke them. One was clear and the inside was almost dried up, this was possibly due to a slight puncture of the egg in the early stages. The other contained a fully formed young one, but dead. The reason for this failure and the first must have been due to the weather, which was the worst I have ever known for June and early July. During the whole period there was not one single hot day. Most days were cold, wet, and windy, with the temperature ranging between 50° and 60° F. It was very sad, for the little hen did her best ; she was a very close sitter and seldom left the eggs except to feed. Even when she did the cock followed her about and tried to drive her back on the eggs. During the period of incubation he took up a stance above the nest, and I think had there been any other birds in the aviary they would have fared badly had they dared to come around. The eggs appeared to be dull brown, darker towards one end, and very much like a warbler's, though on closer inspection they appear to be very finely speckled on a lighter ground.

However there is some slight consolation in the fact that I have a pair of breeding birds, and as Sunbirds are very long lived they may live to breed another day.

I have also another pair, the male of which is the finest Malachite I have ever seen, and was the kind gift of my friend Mr. George Bellars, of Durban. The upper parts of this bird are far more metallic golden than most other Malachites, and when sprayed with a fine sprayer becomes a brilliant copper-red all over.

Since the above was written the little hen was lost and " lost " is not meant as a euphemism for death. Her disappearance will always be No. 1 mystery connected with my aviaries. On returning home from a week-end spent in London I was greeted by the housekeeper, who delights in being the harbinger of catastrophes. Her first words on entering the house were : " One of your best birds has gone." On inquiring which one it was I was told that though she did not know the name, it was a " lady " bird and not a common hen bird !

Search as I might the hen Malachite was never found. One would have thought had she escaped from the aviary that she would have stayed around, for like most Sunbirds she was very tame, and there were plenty of flowers and insects about ; the weather too was now warm.

I am sure the male bird cared less about the loss of his wife than I did.

Next year (1955) the very fine male was put out with his wife into a larger aviary than the other couple had. The hen started almost at once to build a nest. It was on the same lines as that built by the other pair, but bulkier. The position in a privet bush evidently did not suit the hen, for when it was finished she took it to pieces and rebuilt

it in another bush. She did this three times, and by then I was stricken down with an illness which prevented me from seeing the birds for almost a year. That year (1955) was really a Sunbird Year if ever there was one in this land of mists and fogs. We had day after day, week after week, and month after month of golden summer days. Had the first little hen Malachite been with us I am sure she would have reared young ones.

However, I am looking forward to the spring of 1956.

* * *

BREEDING THE DERBYAN PARRAKEET

(*Palæornis derbyana*)

By C. M. Payne (Warwick, England)

I have always had a very soft spot for Derbyans, and this desire was tremendously increased after seeing the beautiful cock bird which Mr. Benjamin showed at one of the National Shows soon after the war. I realized, however, that they were rare in captivity, and I should be extremely lucky if a pair came my way. Since my first enthusiasm for the species I have kept a vigilant eye open for any reports.

One can imagine my elation when, through a good friend, I heard that a fancier had a pair for disposal ; a hurried telephone call and a more hurried journey soon found them in my possession. They were beautiful, in perfect plumage and condition—in fact absolutely glowing with health. This was rather surprising as they had been kept in a cage—a very roomy one, but nevertheless a cage—in a bird room for some years. With me they were placed in a large parrot cage, the intention being to turn them out into a new aviary during the spring of 1956.

As one can imagine, I often passed the cage and gave looks of approval—at last I had a true pair of Derbyans, a dream and long-held fancy had become a reality. Then one day I saw the cock regurgitate some food and feed the hen, and I wondered if this was the first sign of wanting to nest. As luck would have it, I had just placed some Gouldian Finches and a pair of Blossom-headed Parrakeets in a large aviary, and these were quickly removed and redistributed. Then into this aviary went the Derbyans, after I had put in a grandfather's clock type nesting-box. Much anxious watching from a distance took place at this time—I feared that their long, close imprisonment might have cramped the wings, but this was an unfounded fear, the birds flew straight and surely. Within days the hen was interesting herself in the nest and my hopes rose.

The birds were fed on the usual parrakeet mixture with rather more hemp than I usually allow. They also had green food, of which they ate quantities, and about half an apple each every other day. They were not as fond of soaked oats as the Australian parrakeets, although some were consumed.

After about three weeks of this treatment I went abroad for some ten days and on my return my aviary attendant told me he had looked into the nest and found three eggs—I wondered if he had looked into the right nest—but it was so, and there were three eggs. I was naturally delighted, but having kept an extensive collection of birds for more years than I care to remember, I was not unaware of the many obstacles one has to overcome twixt egg and chick.

Contrary to the habits of better aviculturists I often look into my parrakeet nests, and in fact do so continually throughout the breeding season. I am of the firm opinion that if one does it more or less continually, the birds are not disturbed in any way ; so I did look from time to time to see how matters progressed, and after about ten days I was convinced there were three fertile eggs. This, of course, is only one of the obstacles to which I have already referred.

I ought to have mentioned earlier that mating was witnessed on many occasions prior to the laying of the eggs.

The birds are very powerfully built and their beaks look good enough to demolish an aviary in quick time, so I put into the aviary substantial boughs of willow which, as most people know, is quite soft. Although the birds have chewed the boughs considerably, they have not touched the framework of the aviary and, in fact, are less destructive than birds many times smaller. They are also extremely tolerant of other birds, by necessity (which is another story), and for companions they have two pairs of Diamond Sparrows which have also reared young.

I was unable, because of my holiday, to keep an accurate check on the incubation period. I believe it to be 18 to 20 days, because, after what appeared to be this period, young were heard in the nest. Young Derbyans can be heard in the nest without putting an ear to the entrance hole ; they can be heard six yards away from about the first day of hatching.

The hen kept to the nest for the first ten days, being fed there by the cock bird. It was noted at the time that the birds were consuming large quantities of hemp. I simply had to take the risk of feather plucking, which often accompanies large proportions of hemp in the diet, and the birds were given hemp *ad lib.* Fresh green food in the way of lettuce, spinach, and groundsel were ever present, and a few ground nuts were added from time to time. Twice daily they were also given fresh white bread soaked in milk and squeezed fairly dry. Of this they ate about a substantial slice each day.

After ten days or so the hen left the nest frequently, when she was seen to be fed by the cock. During the performance the birds took up the same stance, and the hen kept up a call which reminded me distinctly of the caw of the hen Rook when being fed by the male.

Young were hatched and, being so generously fed by their parents, grew rapidly. At first the young Derbyans were clothed in a white down. The nest feather is a replica of the adults, but naturally some shades duller and lighter in tone with the exception of the head, which is not blue as in the adults, but green. The beaks were red, not quite as deep or bright as the adult cock. After being out of the nest about three weeks the beaks turned black. The young cocks will change again to red during the first moult, the hens remaining black. The young are now as large as their parents—strong, healthy, and powerful on the wing and, in fact, they are perfect in every respect.

So ends the private story of a pair of Derbyans and their owner's elation and misgivings—a further chapter in aviculture.

* * *

BIRD LIFE IN BRITISH COLUMBIA

By L. J. Bettison (Oliver, B.C., Canada)

As a keen ornithologist and a breeder of many interesting foreign birds and a member of the Avicultural Society, I thought some readers might be interested to hear of some of our local wild birds that frequent this part of British Columbia, the Okanagan Valley of the Interior. I have a mixed fruit orchard here in the Oliver district—we are known as the " Dry Belt " and have to grow everything under irrigation.

In the spring when all the trees are in full blossom, the countryside is full of bird life, some resident and many migratory coming here to nest. The small Mourning Doves build in the apple trees and can be heard any time with their rather mournful cooing, but very soft and pleasing. The small Lazuli Bunting nests in the bushes, especially the raspberry patches. The little Goldfinch, which is in full colour of yellow and black, nests in the fruit trees, especially the peach trees. Also, our Siskin has taken to nesting in the orchards—is rather greyer in colour than the English Siskin. We also have a Purple Finch about the size of the House Sparrow.

Next, our Red-breasted Robin, or Thrush, nests in the apple trees. The Mountain Blue Robin takes advantage of any holes or boxes it may find, also its relative the Western Bluebird—not quite so much blue in his make-up. The Red-shafted Flicker (a Woodpecker) and the small Spotted Woodpecker will use any hole it may find. The small

Tree Swallow will nest in any vacant nest-box. We also have the Wood Duck nesting in the river bottom land in hollow trees, such as cottonwoods, etc. The little Song Sparrows and Chipping Sparrows nest in the orchards and our Cowbird usually finds their nests to place one of her eggs in. We have the little Chickadees like the titmice in England. The Meadow Lark, a big bold bird the size of the Starling, nests in the grass and the Orioles make their hanging nests from the tops of many trees. I have one—a cock bird—a pet for two years now and he is very fond of bread and milk. Last summer I found quite a number of Waxwing nests in our trees, and how they love our cherries ! The Black-headed Grosbeak, also nesting here, has a lovely song.

The little California Quail are here in swarms. I have counted as many as seventeen in one of my aviaries left open for the winter. The cock quail have a very pretty call, usually given from the top of a fence post. Our great trouble here is so many of our insectivorous birds get poisoned from the sprays which we unfortunately have to use.

Two kinds of Humming Birds make their tiny nests and lay two eggs ; the Rufous and the Calliope, the latter with a violet bib and the former with a rufous coloured throat.

A bird called the Kingbird—a large black and white flycatcher—nests in most orchards and will chase any bird, including Crows, from the vicinity of its nest. It has been known to perch on the shoulders of a Crow, while in full flight, pecking for all it is worth. Often, when picking plums, I have known the birds to dart at my face, just missing me. This will give you some idea of some of our birds in the orchard.

I am hoping, this year, to breed English Greenfinches, Chaffinches, Siskins, Yellowhammer, Reed Buntings, and Cirl Buntings. I am trying a pair of Red-headed Buntings from India and I have many foreign birds, a variety of Doves, Crested and Bronze-wing Australian, Indian Turtle, local Mourning and Mexican Ground Doves. I have just got a cock Diamond, but no hen.

By the way, the English Starling is making his appearance here and I hope he does not get too numerous. He is seen in flocks of our Red-winged Blackbirds, and Brewer's Blackbirds, which are really a kind of a Starling. At the coast, in Vancouver, the black and white Chinese Starling is also increasing.

I have not mentioned our insectivorous birds much, but we have a large variety and they mostly favour the bottom land along the Okanagan River. The Long-tailed Chat is our Nightingale and can often be heard at night. Our mimic is the Catbird, a blackish-coloured warbler, which is found in nearly every garden and is a great favourite. One of our " Nightingales " is a very small frog that lives, in hundreds, in any swampy place and sings in chorus that takes some getting used to.

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SOME ADDITIONS TO THE WILDFOWL TRUST'S COLLECTION AT SLIMBRIDGE

By S. T. JOHNSTONE, Curator (Slimbridge, Glos., England)

The following ducks are recent arrivals at the New Grounds and may be of interest to readers.

Five specimens of Chinese Spotbill (*Anas poecilorhyncha zonorhyncha*) wild-caught, which were sent to us by Mr. Miyake, of Japan, arrived in May, 1955, together with some wild-caught Falcated Ducks (*Anas falcata*). The Spotbills differ from their more handsome Indian cousins in that their plumage is basically brown rather than grey, and the tip of the bill a deep orange. These are the first of their race to be brought to the New Grounds. They were fairly common in collections before the war, but they seem to be the only ones in Britain at present. Although they have been in the collection for several months they remain quite exceptionally shy and wild.

A welcome addition was a consignment of Ringed Teal (*Anas leucophrys*), from Senor Menge, of Buenos Aires. We received two pairs of these delightful little ducks in October, 1954. Unfortunately they were in very poor condition on arrival and three subsequently died. Happily the survivor is a male and this summer (1955) he mated successfully with one of two females which have been at the New Grounds for several years. Seven young have been reared, but all are of the same sex—females! These Ringed Teal are kept full-winged in an aviary and spend a great deal of time perching. The wings make a curious and very characteristic whistle as they fly. The downy young are like blue-grey Carolina ducklings, with the typically long tail of the Perching Ducks (Cairinini), and a similar walk, with complete absence of waddle. These facts, together with a relatively long incubation period (29 days) support the suggestion offered in the *Key to the Wildfowl of the World* (Peter Scott) and originally, I believe, proposed by Mr. Delacour, that the species should be classified with the Perching Ducks.

One of the most attractive of the Teal, and the smallest of the Tribe Anatini, is the Hottentot Teal (*Anas punctata*). For more than a year we have kept a trio of these birds in the aviary. They are the African version of the South American Versicolor and Puna Teals, but smaller and with a dark triangular patch on the cheeks. This trio was caught and sent to us by Mr. Christopher Savage. Mr. Savage has returned to Africa, and through the good offices of Dr. John Thoburn Williamson, of Williamson Diamonds, Ltd., Shinyanga, he has been able to send us a number of ducks including two more pairs of Hottentots, which are now well-established. The species was bred at Walcot Hall immediately before the last war, so there seems no reason why they

should not breed again, and it would be delightful to re-establish these decorative little birds in British collections.

In June we received from Phra Abhaivongc, of Siam, ten White-winged Wood Ducks (*Cairina scutulata*). These enormous ducks were very wild and refused food for several days. They were quarantined close to our live eel tank and when catching the fish to feed our saw-bills, we tossed a few pieces to the Wood Ducks who consumed them greedily. After a fortnight of eating large quantities, they lost interest in the eels and now feed on the usual diet of poultry biscuit and grain. They have lost their travel-stained feathers and have emerged in immaculate plumage. The females are smaller than the males. Their heads are less white and their bills are not so bright an orange as the males. They make an attractive addition to our collection and have become very tame, though in the summer they were in sad disgrace. A brood of South American Comb Duck disappeared suddenly and theory attributed their disappearance to the White-winged Wood Ducks' cannabilistic tendencies, especially as one had previously been seen trying to swallow a Mallard duckling.

A fine pair of King Eider Ducks (*Somateria spectabilis*) are now in the collection and were acquired in intriguing circumstances. The male, in full plumage, was washed aboard a fishing trawler in Icelandic waters. The Master, on arrival at Reyjkavik, took the duck to Dr. Finnur Gudmundsson, of Reyjkavik, who was at first delighted with the prospect of so fine a skin for his museum. But then he remembered our desire to have this species represented at the New Grounds, and promptly dispatched him to us. He had been fed on shrimps before being sent, and after force-feeding for two days on live eels he was quite prepared to help himself. A happy sequel to this story is that during a visit by our Director, Peter Scott, to the Copenhagen Zoo, Dr. Boje Benzon, hearing of our drake, offered us a fine female, which arrived a few weeks later. The two paired up, but the season was obviously too far advanced for any hope of nesting. Persuading Eiders to moult properly is one of the more difficult avicultural problems, and in this respect males seem to be more difficult than females. The King Eider drake was late going into eclipse plumage, but he got there in September. Correspondingly he has been slow coming back into plumage, but by Christmas he was almost in full plumage again, and the full plumage drake King Eider is one of the finest of all waterfowl. The duck has come into a plumage which is rich chestnut brown, far brighter than that of any female common European Eider, and she shows the two thornlike feathers on her back, though somewhat blunter than in the male.

Of the five pairs of European Eiders kept at the New Grounds only two breed regularly, so we should not perhaps be too optimistic about breeding the King Eiders.

THE BREEDING OF THE LESSER ROCK SPARROW

(*Gymnoris dentata*)

By C. AF ENEHJELM (Helsingfors, Finland)

Like most species of foreign sparrows the Lesser Rock Sparrow is not regularly imported, and when imported there does not seem to be any great demand for the species. Like most other sparrows, especially those in a sombre dress, they are not very popular with the fanciers and obviously hard to sell.

Some six years ago, when visiting the Odense Zoo in Denmark, I saw in a newly arrived consignment of African birds a sparrow which I had not seen before. My colleague, the late director, Chr. Jensen, gave it to me, but later in the year it was killed by a Swainson's Sparrow. In 1952 I found five specimens at a dealer's in Copenhagen which I obtained. The species of the birds was not known and when examining them at home they turned out to be the Lesser Rock Sparrow (*Gymnoris dentata*). Being very busy during 1953 I had no time for making any breeding experiments and kept them in a flight with various weavers.

The birds were not difficult to sex. When I obtained them in 1952 they were all quite similar, obviously young birds. In the meantime I had not made any closer observations, but in 1954 I decided to try to breed them and sexed them out. They turned out to be two cocks and three hens. The colour of the cock is mainly grey and the eyebrow of more pronounced chestnut colour than that of the hen. The hen's colour is distinctly more brown than that of the cock. One pair was separated in a small indoor flight 2½ by 6 feet and 7 feet high. A nest, mainly of coconut fibres, was built in a Budgerigar nest-box but no eggs were laid during the whole summer.

In 1955 I erected a new indoor flight, 22 by 10 feet and 6 feet high, with three large windows facing south and a smaller one facing east; this was rather sparingly equipped with branches, leaving much flying space. Numerous nests of different models: Harzer wicker cages, half-open boxes, Budgerigar nest-boxes, and Keston triangular nest-boxes were hung on the walls at different heights from the floor to the roof. The room was separated from two adjoining flights by ½ in. mesh netting. Two shelves for feeding receptacles were placed on both sides of the entrance door, and a big zinc tray for a shallow bath and an automatic drinker on the floor. The soft food was not given in pots, but scattered over the sand in a big shallow zinc box on the floor. It is my experience that birds more readily take to food when they can pick it up from the ground than if it is offered in pots. The

sand in the box was changed every day and untouched food removed at the same time.

In this flight I released a pair of the Rock Sparrows. The birds were marked with coloured celluloid rings, and I had noted which birds kept together. As well as the sparrows, pairs of different small weaver finches such as Grey, Orange-cheeked, and Golden-breasted Waxbills, Avadavats, Cordon-bleus, Parson, and Masked Grass-finches, Bichenow's, Diamond Sparrows, Red-headed Parrot Finches and Cuban Finches occupied the room. All the birds were released in March.

At the end of March I observed that the hen Rock Sparrow came out from a Keston triangular box hung on the wall at about 5 feet between the windows, the opening facing the inside of the room. On examining the box I saw that the nest was built exclusively of small feathers which had blown into the room through the netting from an adjoining flight for young Budgerigars. Different kinds of building material were, of course, at the birds' disposal but neither hay, coconut fibres, white dog hair, or very thin birch twigs had been used. There were two eggs only in the nest ; typical sparrow eggs in colour and about the size of canary eggs. When examining the nest some days later, on 1st April, two newly hatched youngsters were seen ; these left the nest on 19th and 22nd April. The youngsters were a bit smaller than their parents and of the same colour as the female. As I saw them just after leaving the nest it was an easy task to catch them up and ring them with different coloured rings. The following day they flew almost as well as the old birds.

I now examined the nest every day, and the day after the last youngster had left the nest, on the 23rd April, a new egg was laid, followed on the 24th and 25th by two more. Only one youngster was hatched on 7th May ; the two remaining eggs had disappeared on the 11th. The youngster left the nest on 27th May and on the same day an egg was laid, followed the next day by a second. These eggs were probably clear and disappeared on the 14th June. Three eggs were laid again on 18th, 19th, and 20th June respectively. On 1st July two youngsters were hatched and on 3rd July the last egg hatched. All the youngsters were reared and left the nest on 23rd, 24th, and 25th July. At this time some other bird had removed all the feathers from the nest so that the three youngsters were sitting on the wood of the box, not very comfortable when the form of the triangular box is considered.

In all four clutches of eggs had been laid, three of which had hatched and been successfully reared. No further nesting attempts were made after the fourth clutch.

The youngsters are all thriving well. As far as I can see they all still have the colour of their mother, but I have not tried to catch them

up for closer examination as other birds are still sitting and rearing in the room.

I do not know if it is a special or individual character of this pair, but the birds have all the time been as peaceful as a pair of Bengalese or Parrot Finches. I never saw them chase or attack any other birds, not even a pair of *Fringillaria tahapisi*, their nearest relatives in the flight. Even when sitting on a new clutch the older youngsters were never chased. The birds were not shy, the hen never left the nest till I was close in front of the nest opening. Ten minutes after the nest had been hung in place and I had left the flight she was sitting again.

As to rearing food, egg-food, fresh ants' eggs, sprouted millet, canary seed, oats, and sunflower seeds were offered, and later in the season chickweed too, but very sparingly, as it was hard to obtain in this exceptionally dry summer. As mentioned earlier, the rearing food was scattered on the sand in a large shallow box. As far as I could see fresh ants' eggs were first taken when fresh food was offered. I suppose, however, that other kinds of food were also used as the rearing food was only offered once a day.

I have always fresh ants' eggs at hand, outside the season frozen. It is my impression that many birds start to feed more easily when they have fresh ants' eggs at their disposal than with any other food. When the youngsters in this way are not starved from the start they will be able to beg for more food more energetically, which stimulates the parents to take other rearing foods too, which they probably would not use if the feeding instinct (or reflex) had not first been released by that, from the bird's point of view, obviously very desirable food, the *fresh* ants' eggs.

According to Dr. Russ this species was first bred by the Prince Ferdinand of Sachsen-Coburg-Gotha (later Czar of Bulgaria) in Vienna in 1873, when one young was reared (*Teste* : Russ, *Die fremdländischen Stubenvögel*, i, page 685). The late Czar was one of the foremost aviculturists of his time.

A further breeding success was obtained by Mr. P. W. Louwman at Rijswijk in Holland in 1933 in a large aviary. Three youngsters were hatched, one was thrown out and two left the nest on 12th June and lived to maturity. Mr. Louwman is now owner of the Wassenaar Zoo, and the bird-house, the famous Louise Hall, probably the most beautiful bird-house in any zoo, is no doubt well known to many members of the Society.

As a summary : It seems that the eggs are laid on successive days and that sitting starts when the first or second egg is laid ; incubation time thirteen days. The young leave the nest when about 22–23 days old. As far as I could detect they were fed (by the male) for about a fortnight after leaving the nest.

OBSERVATIONS ON THE VOICE AND SOME DISPLAYS OF CERTAIN PIGEONS

By DEREK GOODWIN (Virginia Water, Surrey, England)

(*Continued from p. 33*)

VOICE

In the Speckled Pigeon, the European species of *Columba* and most (probably all) of the *Streptopelia* species the vocalizations of adult birds can be divided into three or four " basic calls ". These four basic utterances are subject to some variation but not sufficient to render the concept invalid. They seem best termed the " Advertising-coo ", the " Display-coo ", the " Distress-call ", and the " Excitement-cry ". Many American writers (Levi, 1940, Whitman, 1919, etc.) have used the term " crow " for the display-coo. I consider this term unsuitable as it wrongly suggests that this note is equivalent to the crowing of a cock (*Gallus*).

The advertising-coo—the " coo " of some American, and the " song " of many British writers on pigeons—is used in a wide variety of situations whose common factor is that the bird is prevented from performing some (usually reproductive) activity by some cause which does not arouse overt fear or aggressiveness. Usually it is through lack of an appropriately responding partner. In *Columba* it seems confined to birds in some phase of the reproductive cycle, but this is not invariably the case in *Streptopelia*. The nest-call (Goodwin, 1955) is either identical with the advertising-coo or similar, and obviously merely a variant of it, in all species whose voices are known to me. The nest-call of the Mourning Dove (*Zenaidura carolinensis*) would appear from descriptions (Craig, 1911) to differ more than usual from the " song ".

The display-coo accompanies the bowing-display (q.v.). It tends to be polysyllabic and indistinct in *Columba*. In no instance is it louder than the full intensity version of the advertising-coo. In the Stock-Dove it is only audible at a few yards range and the same is apparently true (Taibel, 1954) of the White-collared Pigeon (*C. albitorques*).

The distress-call is a grunting or gasping " Ŏŏrh ! " or " Ĕĕrh ! " very similar in all pigeons known to me. In extreme fear it may be intensified and heightened in pitch almost to a scream. In some contexts this call functions as a warning note. It is given at the sight of a flying bird of prey, if the latter is too far distant to evoke more positive evasive action, and sometimes at sight of other predators. It is, however, also given in situations where the bird shows no signs of fear and its feelings seem rather to be of annoyance, discomfort, or

indecision. Adults usually give it when they see their young handled. On cold winter mornings my Barbary and Red-eyed Doves often utter it whilst still on their roosting places. Here it seems to be an expression of discomfort or perhaps of annoyance caused by a conflict between the impulse to fly down and feed and reluctance to leave the perch. Whitman records pigeons (species not stated) giving this note when they saw others copulating. Probably this refers to birds that would have interfered with the act had they been free to do so. Some species give it immediately after copulation.

In the above two instances it seems equivalent to the excitement-cry of *Streptopelia*. When used after mating it seems more likely to be an expression of aggressive impulses than an expression of pleasure as Whitman suggests.

The excitement-cry is an emphatic " non-cooing " call. It may intergrade with the distress-call, but in typical form is usually distinct from it. It is given as an expression of either aggressive or sexual excitement, but seems linked rather with the intensity than the specifity of the emotion felt. An excitement-cry is common to all the ring-necked doves whose voices have been described (Newman, 1908 and 1909, Goodwin, 1952 ; Hoffstetter, 1952 and 1954) and by the Turtle Dove. There can be little doubt that all their near allies (e.g. *S. lugens*, *S. reichenowi*, et al.) agree with them in this. The Laughing Dove and the Spotted Dove appear, however, to have no excitement-cry. At least they do not normally utter it in the same situations as the other species do. This fact, together with some of their plumage characters, suggests that these two species stand in closer relationship with each other than either does to any other species.

Generally speaking female pigeons coo less loudly and less often than males, and they do not normally use the full intensity sexual form of the display-coo. They use the excitement-cry and distress-call as freely as males. Unpaired females in reproductive condition will often use the advertisement-coo as freely as a male.

Young pigeons possess, apart from the puffing and bill-snapping used in the defensive-threat display (q.v.), only a sibilant squeaking note. This is used as an expression of any apparent excitement, and thus approaches in significance and causation the excitement-cry of the *Streptopelia* species. One has the impression, however, that as soon as the young bird is capable of feeling the same (apparent) specific emotional moods as the adult it will " try " to make the adult notes. In the Speckled Pigeon, *C. livia*, and the Barbary Dove, probably also in other species, this may occur as soon as, or even a little before, the bird is able to fly. At first it can only squeak in the same rhythm as the adult's coos and its voice only gradually " breaks ". Even after it has begun to coo and cry in the adult manner (though not as

yet with the proper adult sound and intonation) the young pigeon will still use the infantile squeaking when begging. As is the case with young grebes, young pigeons use identical cries and wing movements when begging an adult for food as when it attacks them. The only difference is that when begging for food the young one reaches up eagerly, trying to insert its bill into the adult's mouth, and when " begging for mercy " it turns away from the adult, fleeing or cowering.

C. livia

The advertising-coo is the well-known moaning " Ōōrh " or " Oh-ōō-ōōr " subject to some variation. It is given when nest-calling, when ready to feed well-grown young and as a " song " from some perch in or near the nesting territory. Tame specimens, when breeding, but not otherwise, will coo in this manner when waiting for their owner to feed them.

The display-coo is the rather hurried " Ŏŏ-rŏŏ-k'tŏŏ-cŏŏ " (Heinroth's " Wang-wang-ruckuh "). In the intense sexual form of the bowing-display (q.v.) this phrase becomes blurred and its final syllable emphasized and longer drawn. This is probably due to elements of the advertising coo—and its correlated subjective mood —being mixed with or superimposed on the otherwise self-assertive mood and vocal expression.

The distress-call is as described under the general heading. Long-drawn, loud, panting forms of it are given by timid domestic or captive birds defending their nests against an intruding hand. It seems then to be an expression of fear, due to thwarted escaping impulses, rather than of anger, since tamer specimens attack in silence or give the display-coo. Intermediate forms between the distress call and the advertising-coo are used by the female towards her mate in appeasing contexts and more rarely vice versa.

There appears to be no true excitement-cry but a low fretful murmuring sound, only audible at very close quarters, is often uttered, usually when the bird appears somewhat perturbed or angry. This may perhaps be a vestigial form of such a cry.

The Speckled Pigeon

In voice, as well as in display and some morphological characters (Goodwin, 1956), this species seems to stand much closer to *C. livia* than do the Stock-Dove or Wood-Pigeon. The advertising-coo, in its high intensity form, is unmistakable but difficult to transliterate. It could perhaps be written " Wōōrh wōōrh wŏŏ-wŏŏ-wŏŏ-wŏŏ-wŏŏ " or " Ōōrh-ōōrh-hŏŏ-hŏŏ-hŏŏ-hŏŏ-hŏŏ ", the opening notes usually faint, slow and muffled and the succeeding ones increasing in loudness, speed, and emphasis. Although this sounds at first very different

from the advertising-coo of *C. livia* I have the impression that it is in fact nothing but the latter's " Ōōrh " calls, speeded up and run together. When, apparently, less intensely impelled to call, the Speckled Pigeon will utter the " Ōōrh-ōōrh " notes more slowly and they are then hardly distinguishable from the homologous utterances of *C. livia*. The Speckled Pigeon gives this call under the same circumstances as *C. livia*, but (so far as one can judge from a limited number of captive birds) rather less readily. I have only seen it given on the nest-site on a few occasions and these were all rather low-intensity variants that a female gave when her mate came with nesting material for her. This may reflect incomplete observations due to the relative wildness of my specimens rather than actual specific differences between this species and *C. livia*.

The display-coo is a deep, emphatic " Ŏŏrŏŏ-cōō ! " or " Ŏŏr-ŏŏ cōō-ōō ! " commonly repeated twice or more in succession and subject to some variation of tone and emphasis. Often a soft, short " ŏŏ " is audible before the main phrase " ŏŏ-Ŏŏrŏŏ-cōō ! " My only male of the southern form *C. guinea phaenota* gave a more lengthened version when displaying intensely " Ŏŏrŏŏ-cōō-ōō-ōōō ! " I do not know if this difference was of any racial significance. A Stock Dove-like snapping of the mandibles may punctuate the display phrase, but the majority of birds do not do this audibly, if at all. The display-coo of the Speckled Pigeon is always self-assertive and often definitely threatening in meaning though its utterance shows that the bird is, at least at the moment of giving voice, inhibited from attacking.

As with the advertising-coo, the display-coo of the Speckled Pigeon strikes one very forcibly with its similarity to that of *C. livia*, although in this case the notes are delivered much more slowly and deliberately instead of in quicker time. As with *C. livia* the last syllable(s) of the display-coo tend to be more lengthened and emphasized in sexual than in purely threatening contexts.

The distress-call is like that of *C. livia*, but perhaps tends to be a little louder on the whole. It is given under all the circumstances that elicit it in *C. livia*, but also seems sometimes to be used as an expression of any intense emotion. Thus it is given immediately after copulation and also (sometimes) when attacking other birds.

The Stock-Dove

The advertising-coo a rather hurried-sounding but (to my ears) musical " Ōō-ŏŏ-ŏŏ ! " or " Cōō-ōō-rŏŏ ! " subject to some variation. It is given in the same form when used—as it habitually is—as a nest-call.

The display-coo is a very soft, faint, droning " Ōōh-ōōh " or " Cōō-ōō, cōō-ōōh " punctuated in the middle by a soft snapping of

the mandibles. It is only audible within a few yards, hence the frequent statement in bird books that the Stock-Dove is silent when displaying.

The distress-call is like that of *C. livia*, but perhaps rather higher pitched, and given in the same situations.

The Wood-Pigeon

The advertising-coo is the well-known musical cooing "song" which adds so much to the enjoyment alike of our loneliest woods and our dirtiest and most depressing London gardens. It could perhaps best be rendered "Ŏŏ-ōō-ōō-ŏŏ-ŏŏ, ŏŏ-ōō-ōō-ŏŏ-ŏŏ, ŏŏ!" each phrase is usually repeated from two to five times and ends on an abrupt "ŏŏ!" To most of us, however, the advertising-coo of the Wood-Pigeon will ever suggest "Tak too coos, Taffy, tak!", "My toe bleeds, Betty, Oh!" or some other firmly "imprinted" transliteration of our childhood! It has been pointed out (Huxley and Brown, 1954) that the phrase usually begins on the second note, the "too" of the "tak too coos . . ." wording. This appears to be the case when one is at a little distance but on five occasions when I have been within a few feet of a Wood-Pigeon (a different bird each time) as it cooed, it began with the "tak" but this so faint as only to be audible at close quarters. The Wood-Pigeon's nest-call is a rather low-pitched "Ōō, ōōōrh!" subject to variation and sometimes sounding strained and anguished though not typically so. Despite its apparent difference from the advertising-coo it seems in fact to be merely the opening "Tak too" of the song phrase rendered slowly and softly.

The apparently more highly developed phrase of the Wood-Pigeon's advertising-coo, together with a distinct and much simpler variant used only as a nest-call is perhaps due to its being originally a forest bird. This may have favoured the development of a loud, distinctive "song" with a definitely threatening context in reference to unseen trespassers, which in turn necessitated a recognizably different form being used when the function was to attract and not repel another bird. This is mere speculation. It is certain, however, that a male Wood-Pigeon alone on his nest-site seldom gives the nest-call. He stands in normal posture and utters the usual advertising-coo. When his mate, or a prospective mate, comes in sight and shows signs of interest he lowers himself and begins to utter the nest-call and to nod invitingly.

The distress call of the Wood-Pigeon is much like that of *C. livia*. It is apparently given after copulation (Witherby, et al., 1939, Whitman, 1919), as with the Speckled Pigeon. I have not been near enough to copulating pairs of this species to hear whether or not some fairly quiet call was given.

Barbary Dove

The advertising-coo is the familiar " Cŏŏ, C'rrōō ", " Cŏŏ, c'rrōō-ōō ! " or " Cŏŏ-c'rrōō-a ! " I am not able to distinguish it with certainty the display-coo, which is perhaps, typically, a little less long-drawn and " pleading " in tone than at least the nest-calling versions of the advertising-coo. With experience one can usually guess the mood of the bird and its circumstances from the subtle tones and emphasis of its cooing, but I fear any attempt to describe such minutiae in words would be useless, if not actually misleading.

The cooing is used under the same circumstances as in *C. livia*, but also seems to function (as it may in the Wood-Pigeon) as a contact note when the pair have become separated. Specimens released from captivity for the first time in their lives usually coo (as a rule only once and rather softly) on alighting after their first flight. They may do this even if they are not in reproductive condition.

The distress-call is like that of *C. livia*, but rather higher-pitched and (usually) longer drawn-out. It often suggests a single note of the excitement-cry but charged with feelings of despair, sorrow, or fear instead of aggressive self-assertion.

The excitement cry is the rather high-pitched laughing " hĕ-hĕ-hĕ ! " I had one male Barbary (which I most foolishly liberated and lost before I had bred him) whose excitement-cry was a single, long-drawn almost screaming " Hĕĕĕĕĕ ! " sounding much like the excitement-cry of *S. d. decaocto*. In all other respects this bird was typical of the domestic form. The excitement-cry is uttered by both sexes immediately after copulation, as well as in other moments of sexual and aggressive excitement (see Goodwin, 1952, for fuller details).

Barbaries often utter a very faint, rather plaintive, murmuring sound. This is done without any special posturing. Indeed, when I first heard these notes—which are only audible when the bird is within a few feet of one—I thought the bird giving them was suffering from respiratory illness. These notes may sometimes have an appeasing function, but I think they usually indicate only a very low level of any form of emotional excitement. Sometimes indeed they may develop into the excitement-cry. I have heard similar murmuring sounds from the Red-eyed Dove and *C. livia*. Probably they are made by all species.

In the wild palearctic form of the Collared Dove (*S. d. decaocto*), the display-coo, advertising-coo, and the nest-call are distinct (Hofstetter, 1952, 1954), but not markedly different. The excitement-cry is a single drawn out note (often repeated twice or more) that is difficult to describe. It has been compared to the distant cry of a Black-headed Gull, *Larus ridibundus*, or the more distant scream of a Peacock, *Pavo cristatus*.

Red-eyed Dove

The advertising-coo is a spirited, cheerful-sounding " Cōō-cōō, cŏŏ-cŏŏ-cŏŏ, cōō-cōō " or " Cōō-cōō, cŏŏ-cŏŏ, cŏŏ-cŏŏ, cōō-cōō ! " usually repeated twice or more. The same form of it is used as a nest-call. The display-coo is hurried and muffled and suggests a muted and much speeded-up version of the advertising-coo. The excitement-cry is a sharp, rather high-pitched note that could almost be described as a short scream. It is suggestive in its emphasis and suddenness of the " spitting " of a defensive domestic cat. To my ears this cry always sounds mono-syllabic, but Newman described it as " a whistled ' Wee-ha ' ". Unlike the Barbary, with which it otherwise agrees in the circumstances under which it utters its various calls, the Red-eye Dove often utters its excitement-cry when handled. Here it seems to express extreme fear and is given particularly if the bird is struggling to escape. Except that it is perhaps sometimes more drawn-out I am unable to detect any difference in the excitement-cry given by a frightened bird in the hand and that given when angry, or after copulation. The usual distress call is similar to that of the Barbary.

Turtle-Dove

The advertising-coo is the " Cōōrr-cōōrr " or " Tūrr-tūrr " from which the bird's name derives. A variant of this " Cōōrr-cŏŏrr-cōōrr " is used as a nest-call. It is, however, also given from situations—such as high up in bare or thinly foliaged trees—where the species never nests. Possibly this occurs in response to the presence of a female which the previously advertisement-cooing male wishes to attract rather than repel. I have not seen a Turtle-Dove give the nest-call when actually on its song-post (usually a bare, high bough overlooking the nesting area) and suspect that when giving it the bird is always in a situation that to some extent suggests to it a potential nest-site. Unfortunately I did not pay enough detailed attention to the hand-reared Turtle-Doves that I kept and bred in my youth, and under the present bird-protection laws it is not permissible to take any young ones for hand-rearing and close study. The display-coo is a hurried crŏŏr(wa) crŏŏr(wa) crŏŏr(wa) in time with the rapid bobbing movements used in the bowing-display (q.v.).

The excitement-cry is a short percussive note suggestive of the sudden withdrawal of a cork from a bottle. It appears to be slightly less freely used, or rather that a slightly higher pitch of excitement is necessary to elicit it, than the homologous cries of the ring-necked doves. The distress call is similar to that of the Barbary, but perhaps higher pitched.

The very little cooing that I have heard from known females was hoarser and less musical, as well as much less loud than the male's cooing.

The Spotted Dove (Ceylon race)

The advertising-coo is an emphatic " Cŏŏ, crōō-ōō, crōō-ōō ! " or " Cŏŏcŏŏ, crōōr-crōōr ! " subject to much minor variation. It has a rising cadence and an excited " cheering " tone unlike that of any other dove known to me, although except for this quality of excitement in their sound the " crōōr " notes are rather like those of the Turtle-Dove. I have heard my male bird give all his usual variants of this phrase both from his perch and when nest-calling. The female utters quiet and indistinct, but nevertheless rather hoarse and unmusical, versions very freely. This she often does whilst incubating if the male begins to coo. Such cooing from the nest, like the nocturnal cooing in which most doves indulge seems potentially dangerous. Perhaps few natural enemies of doves use their ears when seeking prey.

The display-coo is merely a slightly simplified form of the above " Cŏŏ, crōōr ! " or " Cŏŏ, crōō-ōōr ! " given while bowing (q.v.) and repeated at each further bow.

The distress-call is rather loud for so small a bird, and perhaps also rather longer-drawn out than in other species mentioned, but the difference is slight. There appears to be no excitement-cry.

Philogeny

It seems not out of place to make some remarks as to the probable relationships of the species that have been discussed. The *Columba* species are, without much doubt, more closely related to each other than any one of them is to any of the *Streptopelia* species. The suggestion (Bodenstein, 1949) that the ring-necked doves are more closely related to *C. livia* than is the Wood-Pigeon seems to me untenable. That in some points of structure the latter may be less like *C. livia* is true, but these differences are all due to adaptations to tree or ground feeding respectively and are not likely to have important philogenetic significance. In its displays, as in its plumage, the Stock-Dove shares some characters with *C. livia* and others with the Wood-Pigeon. I think, however, that it is probably more closely related to the former, its striking superficial resemblance to the Rock-Pigeon could well be, at least in part, due to convergent adaptations to ground feeding, hole nesting, and a relatively open habitat.

The Speckled and Rock-Pigeons, although clearly distinct species, seem to be more closely related to each other than either is to the Stock-Dove or Wood-Pigeon. I have elsewhere (Goodwin, 1956) discussed their taxonomic characters and the reasons for supposing their similarities to be due to close relationship rather than to convergent adaptations to a similar way of life. I have the impression that of the two the Speckled Pigeon stands nearer to the Stock-Dove and Wood-Pigeon, in spite of its greater colour difference, than does *C. livia*.

Of the *Streptopelia* species the Barbary and Collared-Doves are almost certainly conspecific. They are clearly more closely related to the Red-eyed Dove (and probably to all other ring-necked doves with the possible exception of the Red Dove (*S. tranquebarica*) than to the Turtle-Dove. I think this latter is, however, probably nearer to the ring-necked *Streptopelia* species than it is to the Laughing and Spotted Doves, in spite of its superficial colour resemblance to the latter species. As has already been mentioned (see section on voice) the Laughing and Spotted Doves appear closely related to each other and to stand a little apart from the other *Streptopelias*.

The above remarks only take into account the species dealt with in this paper. If one knew sufficient to deal with all species of pigeons a very different picture might emerge. The Wood-Pigeon seems nearer akin to several Asiatic species than it is to the Stock-Dove, whilst the latter's nearest relatives are Eversmann's Stock-Dove, *Columba eversmanni*, and the Somaliland Pigeon, *C. olivae*.

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BREEDING OF THE RED CARDINAL

By GUST. A. GJESSING (Drammen, Norway)

After unsuccessful attempts in 1953 and 1954 to breed the Red Cardinal, I have finally found the way to do it and the result was three nests in 1955 with : first nest, 3 eggs—two young matured ; second nest, 3 eggs—two young matured ; third nest, 3 eggs—two young still in the nest as this is written. During two unsuccessful seasons the Red Cadinals built nests and hatched young, but the young died in the nest. I wrote to Mr. Allen Silver for advice. He replied : " Do not be discouraged because you have not had any luck with the Red Cardinal, I have in my time never heard of anybody here who succeeded."

This should mean that the breeding of this bird is quite uncommon. I acquired a pair in 1953 from a member in Denmark, Mr. Walther Langberg, and that summer they built a nest in an old canary wire nest placed in a spruce planted in the aviary. They were at that time with about fifty different finches in an aviary 4 metres by 4 metres outside flight. But the young died after about a week.

Next year they nested in the same nest and under the same conditions, and exactly the same happened. I also had a pair of Pope Cardinals in the same aviary and these also hatched young that died after about ten days.

I had some correspondence with a German breeder who claimed to have raised several nests of Red Cardinals on egg-food alone. Having read Mr. Brooksbank's notes on this bird in his book, I was naturally very sceptical as to the correctness of the statement of this German breeder, but decided to try his method this year. I placed the Red Cardinals in a smaller aviary (2·5 yds. by 2·5 yds.) with 2/2 Violets and 1/1 White-winged Budgerigars. In a corner I set up a pine bush and in this bush I placed the old wire nest that they had preferred before.

I filled the nest half full with cocos-nesting materials and threw some more on the ground. By Christmas I had started to feed them regularly with egg-food, made in the usual way, one egg and some crumbled stale white bread, and added half a teaspoon of strawberry jam each day. At first they did not touch the egg-food, but as time went on and they had it served every day, they started to eat it. Soon after I turned them out in the aviary they finished the nest and the hen laid three eggs, which hatched out, but one young disappeared the first day. I have a strong suspicion that the cock simply considers the possibility of his being able to rear as many young as are in the nest, and if he thinks there are too many he simply eats those he wants to get rid of. They have disappeared so absolutely that this is the only thing I can think of ; I have read in *Cage*

Birds that Thrushes do this, why not then Cardinals? Anyway, the two young were raised on the egg-food, and fourteen days after birth they flew out—very small and very helpless, and in colour all brown. After a week they started to grow and one got a quite bold " top " on his head and showed at first white on the belly, which later turned a vague rose. It was quite easy to see that this was a male. By now they are seven weeks out of the nest and the whole crown of his head, under the wings, and shoulders are red and there is a suffusion of rose on his chest. His tail and large wing-feathers are red with black. The other is certainly a hen. She has the blackish-red feathers in the tail and wings, but is brown otherwise. While the young were being taught to eat, the hen laid and hatched her second brood. There were again two young, and the procedure of leaving the nest was the same as already described.

I noticed that as soon as the second brood left the nest the cock started to pick on the first two young; he chased them around so I had to move them out of the aviary. I had not then seen them feed alone, so I put them for a few days in a cage to see if they really could get along without help. They could; they ate egg-food and small seed. Then I gave them a few mealworms, they looked very sceptical at these at first, but soon learned to take them and to like them.

I also got some fresh ant cocoons for them which they very much liked, as I am of the opinion that some live food is necessary for the cock, at least while he is getting into his red costume, to get the colour better. I am very anxious to see him in complete colour, to find out if the bright red of the new imports comes on birds born here. By the way, I must mention that my Red Cardinals have regained the original bright red colour after every moult since I got them in 1953 in the early spring. Some writers seem to be of the opinion that they *always* turn a brick-red colour when moulting in confinement. This is not so.

The second brood of young are now being taught to eat; they look like two hens, and the old hen is having a third brood, the young now being four days old.

Another thing I noticed which might be of interest was that after the young had been out of the nest a week the cock started to feed them with jam, also regular Budgie seed mixture, in addition to the egg-food; probably to get them used to this type of food.

The first young are now in an aviary with four Cockatiels and one cock Golden Pheasant, which get along nicely. In the aviary where I keep about 100 Budgies, I had placed the pair of Pope Cardinals, and they made a nest in the same tree that had been used the previous two years by the Red Cardinals; they reared three fine young, one of which died two weeks after leaving the nest; the other two

have long been on their own. They acted almost exactly like the Red Cardinals and took the same food ; in addition, I made up a " fly-trap " by filling an old cage with raw fish and placing it in the sun inside the aviary. Soon flies began to flock around this and the Cardinals caught them very nicely and fed them to their young. The hen laid another clutch of eggs, which were clear, and has now for the third time laid three eggs which are not yet hatched out. I noticed the following on these birds : As soon as the first brood of young were out of the nest and she (the old female) had a new clutch of eggs, she taught one of the young to sit on the eggs to keep them warm while she helped the cock to find food for the two large young that were quite demanding. It was very amusing to watch her teach the little fellow to lie still and wait till she came with food for him. He soon was just as conscientious as his mother in seeing the eggs did not chill. By the way, the Red Cardinal is very fond of all kinds of fresh berries while rearing young. The Pope Cardinal, however, does not seem to take berries.

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THE NATIONAL SHOW 1956

An increased number of classes, bringing the total to 46, were allocated to Foreign Birds at the National Show this year. This is the most liberal classification ever to be granted to the foreign section, and attracted a record entry of 700 exhibits. As might be expected, the largest classes were those for the common species of seed-eaters, the common Waxbill class having an entry of 33, but probably the most remarkable entry was that of 27 in the Sunbird class.

Almost without exception the exhibits were staged in excellent condition, and it was particularly pleasing to note the obvious care which had been taken by exhibitors to provide suitable cages of adequate dimensions. Many of the cages containing the smaller softbills were most tastefully decorated, and there is no doubt that the artistic presentation of the birds in this manner must help considerably to counter the adverse criticism of bird-keeping which is too frequently made by members of the public who visit the Show.

An outstanding Violet-eared Waxbill, belonging to Mr. H. Mitchell, was awarded the Rosette for best seed-eater, and the Special for best softbill went to Mr Sawyer's magnificent King Bird of Paradise, which subsequently won the National Award of Merit for best Foreign Bird and the Supreme Championship of the Show against a total entry of over 10,000. It is many years since this species has appeared on the show bench, and Mr. Sawyer is to be congratulated on staging such an outstanding exhibit in absolutely faultless condition.

The same exhibitor won the Duke of Bedford Trophy, for the second year in succession, with his very beautiful Racquet-tailed Parrot, a species which I have not known to be exhibited before, and also the Maxwell Shield for the most artistically decorated cage.

Amongst the small seed-eaters were several pairs of St. Helena Waxbills, of at least three different races, and in the Munia Class were a good pair of Magpie Mannikins, two or three pairs of Rufous-backed, Bronze-winged, and Spotted Munias, and also Tri-coloured, White-headed, and the less common Java Maja.

The Bunting class was won by a good pair of Golden-breasted, followed by Lazuli and Rainbows, and an interesting, if less spectacular exhibit, the African Rock Bunting.

A good class of Weavers included excellent examples of the Madagascar, Chestnut, Thick-billed, and Mahali in addition to the more common species, and among the Whydahs were several Jackson's, together with Queen, Giant, and the attractive Yellow-shouldered.

In the class for Gouldian, and Parrot Finches, the winning pair of Pintailed Nonpareils were claimed at the catalogue price of £12 10*s*. These were followed by one of the best pairs of Red-headed Parrot Finches I have seen, and there were several very good Red-headed and Black-headed Gouldians. Other Australian Grassfinches represented were Cherry, Star, Hecks, Bicheno, Crimson, Painted, and Chestnut-breasted Finches and Diamond Sparrows.

The class for Rare Waxbills included quite a number of Violet-eared, Black-cheeked, Dufresne's, Sydney, and Melbas, and in the A.O.S. Small Seedeaters, Aurora Finches, and Pileated were shown. Also in this class were two unusual exhibits, a pair of Black-faced Canaries and a Madeira Goldfinch, *C. carduelis parvus*. The latter differed so little from the familiar British species as really to look out of place in a class for foreign birds.

Seventeen entries in the Cardinal and Grosbeak class included a number of Chinese Grosbeaks, particularly noticeable on account of their unusual white flight feathers, a pair each of Evening Grosbeaks and Pigmy Cardinals, a cock Virginian Cardinal shown in excellent condition and in the full glory of its natural brilliant colouring, and good examples of Green, Red-crested, and Dominican Cardinals. The remaining Seedeaters included an interesting pair of Chingolo Sparrows, Chinese Painted Quail, Diamond, and Zebra Doves.

The Softbill section was quite outstanding, not only for the brilliance of colouring and variety of the exhibits, but also for the number of species which had not previously been seen on the show bench. The first class, for Birds of Paradise and Bower Birds, contained only three entries, Mr. Sawyer's King Bird to which reference has already been made, Mr. Whitmore's Red Bird, and the same owner's very fine

Satin Bower Bird. Humming Birds were also few in number, and the class was won by Mrs. Draper's delightful little Pucheran's Emerald, a bird which I am told has now completed its fourth moult in captivity. It was looking extremely well at this Show, and gave the public ample opportunity to study the remarkable powers of flight of these tiny birds. Mr. Sawyer sent a Dusky Jacobin, the first example to be exhibited, and although of rather sombre hue, it was nevertheless attractive on account of its larger size and rather striking white tail.

The Sunbird class, as already mentioned, drew from exhibitors the remarkable entry of 27, and from the Show Manager the comment that there could surely be no more Malachites left in Africa ! In spite of several absentees, the display of these beautiful nectar-feeding birds was a sight never to be forgotten, and it was no easy task to decide the order in which they should be placed.

Mr. Sawyer's cock Regal, another species appearing on the bench for the first time, was awarded first prize. It was in perfect condition and well displayed all the natural colouring of vivid scarlet, yellow, metallic golden-green, and blue-black—a very lovely bird indeed. The class also contained Amethysts, Malachites, Mariquas, Lesser Double-collared, and no less than four sub-species of the Greater Double-collared, including Grauer's, which has the golden-green of the upper parts replaced by metallic blue and the centre tail feathers noticeably longer. Mention must also be made of two Malayan Yellow-breasted Sunbirds, another species which I believe was exhibited for the first time. Less spectacular than the African species on show, they have nevertheless great charm, the metallic green of the upper parts being well set off by the soft yellow of the breast feathers.

The most outstanding exhibit in the Sugar Bird class, a cock Cape Sugar Bird, was again the property of Mr. Sawyer. It was unfortunate that this bird had attempted to murder his mate shortly before judging commenced, in spite of the fact that the pair had lived amicably together for some considerable time, and she had to be removed from the cage. In spite of this, the cock easily headed the class which was provided for any species of Sugar Bird and in which he was therefore correctly shown, although I feel that the species is so far removed from the South American Sugar Birds with which we are more familiar that the competition was somewhat unfair. An exceptionally fine cock Yellow-winged was second, followed by a pair of the same species, a cock Blue and a cock Black-headed.

Zosterops and Pekin Robins were together in the next class, with 25 entries and, in addition to the common Asiatic species, there were good examples of the large Cape Zosterop and a delightful and very small species which I took to be the White-breasted, *Z. abyssinicus*. Several good pairs of Pekin Robins were shown, but at least one, in

my opinion, was completely spoilt by intense colour-feeding which had produced an entirely unnatural appearance, the stain having even penetrated to the feet and claws. Surely the natural colouring of a really well conditioned Pekin is beautiful enough without artificial aids.

Among the small Tanagers the most unusual was the winning Orange-breasted, *C. thoracica* from S.E. Brazil. A few of these Tanagers were imported in 1936, and the species was last shown in 1939, and I imagine that the one now being shown by Squadron-Leader Everitt is the only example of its kind in the country. The same exhibitor was third with a very well coloured Yellow, and the Class also contained a Festive, several Superbs, and Blue and Blacks. Although the sexes of the latter are readily distinguishable by the very pronounced greenish tone of the hens, it is surprising to find how often two cocks are shown as a true pair, a mistake which occurred at this Show.

The larger Tanagers were combined with Bulbuls and Shamas, and the class contained two examples of the fine large Indian Black Bulbul, *Microscelis psaroides*, the broad and distinctly forked tail, high crest, and bright red beak and legs giving these birds a most striking appearance in spite of the dull hues of the plumage. Other exhibits were a fine Orange-rumped Tanager, several good Scarlets, Striated, Pretre's, and Black Tanagers, and two pairs of Red-eared Bulbuls.

Two excellent pairs of Shamas were shown to perfection, and a single cock entertained visitors to the Show with almost continuous song of quite exceptional merit. Two very distinct types were represented, the variation being most noticeable in the hens. The common Indian form, *K. macrura*, showed the clear grey head with a clean cut line of demarcation on the upper breast, the chestnut undercolour being very pale. The other, which I take to be an example of *K. suavis* of Borneo, was considerably larger, the grey of the upper parts being less clear and of a brownish tone, with the marking less clearly defined. The chestnut colouring of the under parts was much deeper, in fact little less intense than that of the cock.

Flycatchers, Robins, and Chats were well represented, and the class was headed by a delightful cock Tickell's Flycatcher in most perfect order, followed by Mr. Sawyer's Natal Robin, which is now well known on the show bench and was looking extremely well. A very nice pair of Short-billed Minivets were third. These birds were also in really wonderful condition, but the cock unfortunately lacked the brilliance of the natural scarlet plumage. The class also contained a Rufous-bellied Niltava, Noisy Robin, Indian Robin, African White-throated Robin, and pairs of Verditer Flycatchers and Silver-eared Mesias.

Fruitsuckers, Thrushes, and Jay-Thrushes were combined in the next class, and first place was awarded to a good pair of Hardwicke's Fruitsuckers, well staged in a most tastefully decorated cage. A Black-throated and several Golden-fronted Fruitsuckers were also shown, and Thrushes were represented by a pair of American Robins. Mr. Anderdon exhibited a very nice Chinese White-eared Mocking Thrush, and Mr. Whitmore a Rufous-throated Jay-Thrush, and it was pleasing to see that a pair of the attractive White-crested Jay-Thrushes, although a common species, were successful in gaining recognition.

The next two classes caused some confusion to exhibitors, as the first was for Starlings (True and Glossy and Pagoda), and the second for any species of Mynah, and it was not surprising to find similar species entered in both classes. However, Mr. Wragg very wisely transferred several entries, leaving the first class with eleven Glossy Starlings and placing all the Mynahs together in the second. Mr. Whitmore's pair of Amethyst Starlings were first, followed by the same owner's Purple-headed. Red-eyed Green, several more Purple-headed, Beautiful Spreos, and a Long-tailed Glossy completed the class.

The Mynah class had 17 entries, and it was very pleasing to see the reappearance, after many years, of the charming little Mandarin. As might be expected, there were a number of Greater Hill Mynahs, several of which subsequently distinguished themselves in the Talking Contest. The class also contained Southern Hill Mynahs, Malabars, Bank and Jungle Mynahs.

Toucans were represented only by a Green-billed and Lettered Aracari, but in the same class Mr. Whitmore's Knysna Touraco, *T. corythaix*, was a magnificent bird and well deserved the premier award. It was followed by Mrs. Draper's very good Hartlaub's Touraco.

Finally, three classes were provided for Softbills not otherwise classified, grouped according to size, and these contained some of the rarest and most interesting exhibits. The class for smaller species was won by Squadron-Leader Everitt's charming pair of Ixulus, followed by Mr. Sawyer's Audubon's Warbler, one of the most attractive of the many N. American Warblers, with striking plumage of yellow, grey, and black. Another N. American species, the Black-capped Chickadee, was also shown in this class, together with a Superb Manakin and two Chestnut-breasted Nuthatches.

There were twenty entries in the class for medium-sized species, and again Mr. Sawyer staged the winner, a White-collared Kingfisher, which was a quite outstanding exhibit. It was followed by a delightful North American Cat Bird, a species which, in spite of its rather dull colouring, combines the charm of a Shama and active movements of a large Warbler, and is said to have a fine song. Greater Blue-winged

and Hooded Pittas, a Saturnine Mocking Bird, Mexican Clarino, Pied and Blue-cheeked Barbets, Brazilian Hangnests, Silky Cowbirds, a Cedar Waxwing, and Yellow-billed Oxpecker completed the class.

The Oxpecker was an interesting exhibit, but it must be admitted that it did not show to advantage. The wooden perches of the show cage seemed unsuitable as a resting-place for a bird with feet and claws adapted for clinging to the broad backs of cattle and game animals, and would have been better replaced by a rough log.

The class for the larger species was won by Mr. Sawyer's pair of Roul-Roul Partridges, another very fine exhibit which attracted much attention and favourable comment. It must be twenty years since this species was last seen on the show bench in this country. A Steller's Jay was another species which has been seldom seen here. It was steady and well shown, but needs good light and ample space to display the fine purple and deep blue of its plumage to full advantage. The class also contained Mrs. Draper's rare Geng Jay, a Wandering Tree Pie, Occipital Blue Pie, and Yellow-headed Marsh Bird.

The section for Parrot-like birds drew a total entry of 80, but apart from the classes for Lovebirds and Parrotlets which accounted for half of this total, and contained many good examples of Fischer's, Masked, Peach-faced, Red-faced, Nyasa, and Abyssinian, a pair of Turquoise-rumped Parrotlets and an attractive hybrid Peach-faced × Fischer's, the numbers in each class were disappointing. However, the quality of the exhibits left little to be desired, and a number of exceptionally rare species were benched, several of which had not previously been shown. Of particular note were Mr. Sawyer's Racquet-tailed Parrot, of which mention has already been made, and his Salawati King, a superb bird which might well have shared the supreme award, also Mr. Lawrence's lovely Long-tailed Parrakeet.

The class for Lories and Hanging Parrots also contained several rare and attractive exhibits, including a pair of Black-capped Lories in very fine condition, a Red Lory, Mitchell's, Musschenbroeks, and Ornate Lorikeets and a pair of Blue-crowned Hanging Parrots.

Very nice Plum-headed and Ring-necked Parrakeets were shown, but Australian species were poorly represented, and the large species had only five entries, two hen Red-sided Eclectus, an Orange-winged Amazon, Roseate Cockatoo, and an African Grey.

K. A. NORRIS.

NOTE

Since writing the above report I have had an opportunity to read Mr. Seth-Smith's notes on the previous National Show, which appeared in the January/February, 1955, issue of this Magazine.

Unfortunately I was not able to visit the show on that occasion, but

it appears that a pair of Oxpeckers were then exhibited, and Mr. Seth-Smith and I have formed precisely the same impression of these birds when confined in a show cage.

It is a somewhat remarkable coincidence that we should describe our impressions in almost identical words.

* * *

FEEDING SOFTBILLS

By W. D. CUMMINGS (Keston, Kent, England)

As many people seem to be put off keeping insectivorous birds because they think the feeding of them will be too messy and complicated, I thought it might help to dispel this notion if I put on paper my own experience with various species.

Obviously, nowadays, one must bear in mind economy when feeding fruits and it is with this in view that I offer the following suggestions on food diets. Aviculturists still shudder at the thought of the trouble and expense involved in keeping softbills, but it is not so. When their basic requirements are known, also alternatives or extras, one can create a system, and feeding becomes a routine almost as simple as filling up a seed hopper.

Softbills generally, through their necessity to hunt for their varied food supply, and consequent agility, are perhaps more intelligent than seed-eaters—Psittacine species apart. They consequently give considerably more pleasure to their owners by their habits and colouring, and once the myth of the difficulties of feeding them is exploded, their advantages should exceedingly outweigh any other consideration. One starts meeting snags with softbills when one commences trying to breed them, but the excitement is all the more after a successful achievement.

I think it very important in feeding all birds to have a basic diet, and it is the same with softbills. I also consider that a little variety does a world of good. The " basic " is the everyday feed, and the " various " consists of extras when available. The basic food should be a complete food that satisfies a bird's hunger and needs, and is chosen for this purpose, and also because the bird likes it. The extras keep a bird in tip-top condition.

When our softbills first arrived at the Keston Foreign Bird Farm, I am afraid they ignore all basic diets and just have their particular likes and dislikes. We have to pander to them until they are fit enough to be brought slowly on to their permanent foods—in the case of Shamas and Dhyal Birds, their insectivorous mixture. When these latter birds arrive they revive only on the sight of live food. We supply gentles *ad lib* with a few mealworms, two or three a day each. They have insectivorous mixture by them all the time. After picking up we

reduce the live food after making sure they have taken to the insectivorous mixture. It is important that the latter should remain moist and appetizing, and I advise only as much should be given every day as a bird will eat. It can be moistened daily with grated carrot.

I should stress before I continue that you must be sure that fruit and soft food is not kept where the sun can dry it, and especially in the summer one must ensure that the food table is in a cool place where the food will keep fresh.

To continue with Shamas and Dhyal Birds—once they have put on a little weight and are fit, a diet of insectivorous mixture and gentles daily (a couple of dozen) and a few mealworms occasionally, especially when moulting (about six at a time) should keep them in the best of health. They seem purely insectivorous and the only fruit I have found they are very fond of are elderberries, and these I can recommend for all softbills and there is no limit to the amount one can give—but they must be ripe.

Apart from food requirements, they must have natural perches for their feet and a bath daily. I don't recommend putting them out into outdoor aviaries until they have moulted out in captivity, and then both Shamas and Dhyal Birds do very well in planted aviaries for the summer, but not together.

For all soft food eaters I thoroughly recommend finely chopped cooking dates. I find they all like them, and they are very nourishing. These I give daily to Fruitsuckers, Sugar Birds, Waxwings, Glossy Starlings, Hanging Parrots, Bulbuls, and Mynahs. This is part of their basic. Apart from dates and soaked currants I find Waxwings very fond of a little bread and milk daily. I cannot get ours on to anything else. Starlings, apart from dates, have a basic of insectivorous mixture and gentles, and a few mealworms, not more than half-a-dozen occasionally. Apples, sliced and pushed through the wire netting, and the dates are the only fruits they seem fond of. I also give them bread and milk daily. I do consider they need mealworms to bring them into breeding condition, as do all the insectivorous birds, but gentles are sufficient to keep them fighting fit, and safer.

Mynahs are—as are Pekin Robins—omnivorous, but a basic of insectivorous mixture, dates, bread and milk, apple, and gentles—especially in the chrysalis stage—are sufficient to keep them fit and healthy. Hill Mynahs are extremely fond of pear and grapes, but these are luxuries. If one is feeding them on scraps entirely then potato should be their basic.

Bulbuls, Fruitsuckers, and Sugar Birds (Yellow-winged) I find do very well on dates, sliced apple pushed through the netting, bread and milk (sweetened), pear and gentles, as basic, with either sugared orange, banana, or soaked currants alternatively as extras.

When we first receive Sugar Birds and Fruitsuckers I give them

nectar—consisting of a teaspoonful each of condensed milk and honey and a quarter teaspoon of Mellin's Food to a cupful of water—but as they always seem to neglect this after about six weeks in favour of the fruit and dates and the rest of the diet, I discontinue the nectar. I think a small pot of honey and water would probably be beneficial as well. They don't eat many gentles, and I think a few mealworms would be appreciated. Minivets are mainly insectivorous, and gentles and the mixture, with a few mealworms, would satisfy them.

Most of our fruit eaters we get out into outdoor aviaries here at Keston as soon as they are fit enough, splitting up the more tricky-tempered birds—to mix Sugar Birds, Bulbuls, Fruitsuckers, and one Dhyal Bird together in one aviary; in another, Pied and Bank Mynahs, Troupials, and Marsh Birds; and one Fruitsucker and Shama. They thus have plenty of fresh air and exercise.

Troupials and Orioles seem small eaters—both, I believe, being more insect than fruit eaters. Both like gentles (and mealworms), bread and milk, chopped dates, apple, and need insectivorous mixture moistened with shredded carrot. I find they hardly touch pear, orange, or banana.

The already mentioned diets, then, will give some idea of the fundamental foods necessary to their health, and cover all individual preferences of the species mentioned—and it could also be safely and beneficially given to any insectivorous or fruit-eating birds, as the case may be.

* * *

LONDON ZOO NOTES

By J. J. YEALLAND

During January Professor M. A. C. Hinton brought home a Kestrel that had flown on board the ship in which he was travelling when it was some 400 miles to the westward of Colombo. The bird, a female, looks very like the Kestrel of this country which, of course, ranges as far eastward as western Siberia and southward in winter as far as the Gold Coast, Tanganyika, Arabia, and north-western India. This specimen appears too pale to be the race (*objurgatus*) inhabiting southern India and Ceylon.

Squadron-Leader K. C. Searle sent a gift of two Water Cock (*Gallicrex cinerea*) and three Eastern Greenfinches (*Chloris sinica*), sometimes called by the dealers the Eastern Goldfinch.

Miss Knobel has presented a Malabar Mynah (*Sturnia malabarica*), also known as the Malabar Starling or Grey-headed Mynah. Two Cockatiels have also been presented. The donor called them "Quettels", a name I have been unable to trace, and evidently one of the Australian local names.

Three Jabouille's Jungle Fowl (*Gallus g. jabouillei*), new to the Collection, have been deposited. This is the race from northern Indo-China, first described in 1928 by Delacour and Kinnear. An Elliot's Pheasant and two Chestnut-eared Aracaris (*Pteroglossus castanotis*) have been received in exchange. This species of Aracari has been exhibited in Regent's Park only once before : there are two forms, this one inhabiting a rather small area in north-western South America and the other, *P. c. australis*, having a fairly wide distribution further south.

A Black-headed Plover (*Sarciophorus tectus*) has been purchased and a Black-footed Penguin bred in the Gardens.

The Cereopsis Geese are nesting ; the Emu eggs and those of the Ceylon Fish-owls were again infertile.

A Red-necked Grebe found exhausted in Sussex was brought in a few days ago. It is already much stronger and feeding well, so if and when it recovers the waterproofing of its plumage it will be released.

* * *

COUNCIL MEETING

A Council Meeting was held on 14th March, 1956, in the Council Room, Zoological Society of London.

Society's Medal

The Society's Medal was awarded to :

Mr. E. J. Boosey, for breeding the Chestnut-and-Black Warbling Finch (*Poospiza nigro-rufa*).

Dr. S. B. Kendall, for breeding the Timor Cockatoo (*Kakatoe sulphurea parvula*).

Arthur A. Prestwich,
Hon. Secretary.

* * *

BRITISH AVICULTURISTS' CLUB

The Hon. Secretaries gave a Dinner at the Rembrandt Hotel, on 13th February, 1956, to celebrate the 10th Anniversary of the formation of the Club.

The following Founder Members were present : Miss P. Barclay-Smith, W. D. Bell, Captain A. A. Clarence, Dr. E. Hindle, G. T. Iles, H. J. Indge, F. T. Jones, Miss E. M. Knobel, Miss M. H. Knobel-Harman, P. H. Maxwell, D. Seth-Smith, A. C. Soanes, and E. N. T. Vane.

* * *

The fifty-first meeting of the Club was held at the Rembrandt Hotel, Thurloe Place, South Kensington, S.W. 7, on Wednesday, 14th March, 1956, following a dinner at 7 p.m.

Chairman : Miss P. Barclay-Smith.

Members of the Club : P. C. Bath, Hylton Blythe, Mrs. V. M. Bourne, J. O. D'eath, Miss S. A. Fothergill, Miss D. Gask, F. Grant, W. C. Hall, H. J. Harman, M. Scott Henderson, Dr. E. Hindle, H. J. Indge, F. E. B. Johnson, F. T. Jones, Miss E. M. Knobel, Miss M. H. Knobel-Harman, Mrs. E. M. Lonsdale, F. Mosford, G. S. Mottershead, S. Murray, Sir Crawford McCullagh, Bart., K. A. Norris, A. A. Prestwich, D. M. Reid-Henry, S. Sanderson, R. C. J. Sawyer, D. Seth-Smith, A. C. Soanes, T. Spence, E. O. Squire, E. N. T. Vane, N. S. Walker, C. H. Wastell, Mrs. C. H. Wastell, Mrs. G. Wheatley.

Guests : J. Bailey, Dr. E. V. Baxter, Miss L. M. Connell, S. A. Croucher, Mrs. S. A. Croucher, Mrs. F. Grant, Mrs. F. E. B. Johnson, Dr. S. B. Kendall, R. G. Kirkham, Mrs. G. S. Mottershead, Miss M. F. Mottershead, Mrs. S. Murray, L. D. Rowe, Mrs. K. C. Searle, Mrs. D. Seth-Smith, N. R. Steel, Mrs. H. M. Vane.

Members of the Club, 36 ; guests, 17 ; total, 53.

The evening's programme was advertised as a conversazione, but it proved to be a surprise presentation evening. First the President of the Society, Mr. David Seth-Smith, drew attention to the fact that it was the 10th Anniversary Meeting of the Club. He said that to mark the occasion it had been decided to present the Hon. Secretaries with "a token of our gratitude and great appreciation". This took the form of a large Dresden china parrot which he handed to Mr. Prestwich. In the unfortunate absence, due to illness, of Miss Kay Bonner, Mr. Prestwich accepted on her behalf a Victorian bouquet of freesias from the hands of Mrs. Seth-Smith.

After the Loyal Toast the Chairman said she had very great pleasure in proposing the health of the Club's most distinguished member, Dr. Edward Hindle, who was celebrating his seventieth birthday within the next few days. In a very gracious reply the Doctor paid the Club a great compliment when he said for him one of the happiest and most fortunate things he had ever done was to become a Founder Member. A large birthday cake was then produced, and the members and guests rendered the usual birthday refrain in a manner somewhat unmusical.

Mr. Hylton Blythe said he would like to take the opportunity of asking Dr. Hindle a non-avicultural question. Under what circumstances had he introduced the Golden Hamster into England ? The Doctor gave a short history of its discovery and re-discovery in Aleppo and an account of the first breeding in captivity in 1929. Since then many hundreds of thousands have been bred, and he admitted that

he was indirectly responsible for all the Golden Hamsters in this country.

The next meeting of the Club is on **9th May.**

ARTHUR A. PRESTWICH,
Hon. Secretary.

The Hon. Secretaries tender their warmest thanks to the many members of the Club who so generously contributed to the presentation fund. Their expressions of appreciation, both personal and collective, are very greatly valued.

KAY BONNER.
A. A. PRESTWICH.

NEWS AND VIEWS

In the New Year's Honours List A. G. Glenister, author of *The Birds of the Malay Peninsula, Singapore, and Penang*, was appointed C.B.E.

* * *

The few breeders with blue Masked Lovebirds have reported very disappointing results for last year—the number of adults lost very considerably exceeded that of young reared. It is, therefore, the more heartening to learn that R. G. Kirkham, Dublin, fully reared eleven.

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A. H. Isenberg, California, reports some very interesting breeding results for 1955 :—Fully reared, 6 Indian Brown Robins, 2 Mexican Jilgueros (*Myadestes obscurus*), and 1 Grey Struthidea. Others to nest were :—Ixulus, five young ; Black-capped Honeyeater, nest built ; Satin Bower-Bird, eggs ; Spreo, young ; Quetzal.

* * *

The Spotted-breasted Oriole (*Icterus pectoralis pectoralis*), of Central America, has unaccountably appeared in Miami, southern Florida, about one thousand miles from its natural habitat. The colony, which seems to be well-established, is believed to number about one hundred. It has been suggested that its origin lies in escaped or even liberated cage-birds.

* * *

Kenneth Smith, Superintendent, Paignton Zoological and Botanical Gardens, sailed in the S.S. *Arakaka* from Liverpool to British Guiana on 17th February, and expects to return in May or June. The main purpose of the visit is to collect macaws, parrots, caiques, etc., to re-stock the newly-renovated Parrot House, also to get a really large and varied collection of reptiles for the Reptile House and Aquarium building which is also being completely renovated.

L. J. Bettison, British Columbia, writes : " I have had quite good luck in breeding Lovebirds this winter. The temperature is about 5° above zero, but I manage to keep the aviary up to 60°. I have reared Peach-faced, Masked, and Fischers so far, also some Strawberry Finch-Silverbill hybrids. At first I thought they were Chestnut-breasted and Strawberry Finch, but now I feel sure they are half Silverbill. They look like the Silverbills, but have red rumps : they sing quite nicely."

* * *

H. Murray writes : " It may be worth recording that the young from the Cordon-bleu–Blue-breasted Waxbill cross are fertile when crossed back to the Cordon-bleu. These Waxbills are, of course, so closely related that the young can hardly be regarded as hybrids." Some of the birds bred are : Cockatiel, fourteen from two pairs ; Bourke's, three, the parents were a young pair ; Nyasa Lovebird, one reared ; Green Cardinal, three really good young ones reared ; Red-eared Waxbill, young flying but not fully reared.

* * *

J. H. Reay has a Golden-fronted Fruitsucker that flourishes and continues in rude health on a diet of half an orange sweetened with caster sugar (incidentally, the orange is placed in a small basin to obviate it getting on its feathers) and anything up to two dozen meal-worms per day. As Reay says : " Could anything be more simple to keep ? " This bird, which has been in Reay's possession for nearly nine years, has the run of the house, is a charming pet and a wonderful singer.

* * *

J. Dalborg-Johansen, Odense, records the following breeding successes in his bird-room during 1955 : Madagascar Lovebird, seven reared by one pair ; Nyasa Lovebird, five ; Masked Lovebird, three split-blue and six so-called yellow ; Blue-rumped Parrotlet, six young reared by the cock unaided following the death of the hen when they were only five days old ; Lineolated Parrakeet, three reared after two previous failures when the young were deserted at about ten days old ; white Java Sparrows ; white and cream Zebra Finches ; and a few Painted Quail.

* * *

J. H. Reay reports for 1955 : " The only birds reared were four very nice Barrabands and fourteen Bourkes from two pairs. The Plum-heads were again disappointing, both pairs laying infertile eggs. The two pairs of Rock Pebblers showed no interest at all in their nest-boxes. It was the same with one pair of Many-coloured ; the

other pair, however, did lay three eggs, but made no attempt to incubate them. There was no increase with the Gouldians, and when they do start nesting there are several losses to be made good."

* * *

The Bourke or Bourke's Parrakeet ? A member inquires why in my *Records of Parrots Bred in Captivity*, I refer to *Neophema bourkii* (Gould) as the Bourke Parrakeet. Really it is just a matter of preference. English aviculturists usually call this species Bourke's Parrakeet, whereas Australian aviculturists and ornithologists almost invariably call it the Bourke : a few, however, use the less common Pink-bellied or Blue-vented—Mathews always used the last. Old-time trappers apparently called it, quite erroneously of course, the Night Parrot. This Parrakeet was discovered by Major (later Sir) Thomas Mitchell, naturalist and explorer, on the banks of the Bogan River, New South Wales, in 1835. It is first mentioned, under the bare name *Nanodes Bourkii*, in his *Three Expeditions into the Interior of Eastern Australia*, vol. i, p. xviii, published in 1838. It is here merely listed amongst the specimens deposited in the Australian Museum, Sydney.

Major Mitchell built a stockade near the junction of the Bogan and the Darling : this he named Fort Bourke after the then Governor, His Excellency Sir Richard Bourke. Thus, this Governor of a century and more ago has his name perpetuated by a thriving township and by one of the most charming Parrakeets.

* * *

Round the Zoos

Belle Vue, Manchester.—Arrivals, two King Penguins, young birds presented by the Edinburgh Zoo.

Paignton Zoo.—Arrivals, a Great African Wattled Crane (*Bugeranus carunculatus*) from Northern Rhodesia—believed to be the only specimen in Europe, certainly the only one in Britain ; three Spur-winged Geese ; a Tawny Frogmouth, presented by the London Zoo ; and a Richardson's Owl (*Aegolius funereus richardsoni*) which was caught on the deck of a cable ship 150 miles off Cape Cod.

Glasgow.—A King Penguin was hatched but died after two days. The Penguin population has been increased to fourteen by a gift from the Edinburgh Zoo of two young Zoo-bred Kings and two Gentoos.

Rotterdam.—Arrivals, two Orinoco Geese, one Crested Duck, and various Sunbirds.

Wassenaar.—New arrivals include one Six-plumed and a pair of Magnificent Birds of Paradise ; a pair of Crowned Pigeons ; and two young (? Helmeted) Cassowaries.

The payment of subscriptions by money order is one of the most convenient methods open to members living abroad. It is, however,

most important to notify the Hon. Treasurer of such payments. In many cases the name of the remitter does not appear on the money order, with the result that there is usually a number of " unidentified " orders in hand. It thus sometimes happens that a request for payment of subscription is sent to a member who has already paid by this method, but omitted to notify the Hon. Treasurer at the time.

Listed on the cover are some money orders that have not yet been credited to the senders.

Will members who have not received receipts please examine this list, and in the event of their recognizing the brief particulars kindly inform the Hon. Treasurer.

A. A. P.

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REVIEWS

FOREIGN BIRD KEEPING. By EDWARD BOOSEY. With photographs by ALEC BROOKSBANK. 342 pages. *Cage Birds*, London, 1955. Price : £3 3*s*. net.

Reviewing Edward Boosey's book, *Foreign Bird Keeping*, is one of the pleasantest tasks I have ever been asked to perform. In the first place the author is one of my oldest friends, and it is always interesting to read a book by someone you know. Secondly, many of the birds described in its pages are specimens with which I was personally acquainted at Keston ; consequently it is filled, for me, with memories of my very happy association with the Foreign Bird Farm for which Edward Boosey and his partner Alec Brooksbank are famous.

For instance, I well remember the Banksian Cockatoo illustrated on page 129, and I shall never forget the thrill of looking into a nest-box and seeing the brood of five young Blue-fronted Amazon Parrots, whose photograph appears on page 138, just before they were due to fledge, and realizing that these were the first of their kind ever to be reared in England.

Here is a book by someone who really knows what he is writing about. The author has wisely kept to those species which he has actually owned himself. He tells us what he knows and has been honest enough to say when his knowledge of a bird is not complete. There is, therefore, no fear of anyone being misinformed. Mr. Boosey's descriptions of the birds he has kept are not only informative, but lightened with amusing anecdotes. Each account is a fascinating word picture of the appearance and character of the bird in question. That is what makes his book such absorbing reading.

To anyone interested in foreign birds this work—the product, as the author himself states, of 40 years' practical experience—will be an essential part of his library.

The author is, of course, acknowledged as one of our leading authorities on parrot-like birds. I doubt if there is anyone living who has consistently bred year after year and generation after generation so many fine specimens of rare and beautiful parrakeets. The section on these birds alone, therefore, is a standard work of reference. It must be realized, however, that his experience of bird keeping is far wider than this, and the chapters dealing with finches, softbills, doves, and pigeons are every bit as interesting and instructive.

Like all good bird keepers, Mr. Boosey has what gardeners call " green fingers ". His sympathetic understanding of birds and their ways is apparent all through his book. This ability to know your birds and to do the right thing at the psychological moment is, to a great extent, an inborn quality, but to those who wish to acquire it, I would say read *Foreign Bird Keeping* with care and you will become a better aviculturist.

A great asset, without which this book would not be complete, is the very fine selection of coloured and black and white photographs by Alec Brooksbank. Without exception, they are portraits of birds living at the Keston Foreign Bird Farm at one time or another. Knowing the difficulties he has encountered in taking these, and remembering what temperamental subjects the birds themselves can be, I can fully appreciate the infinite pains which Mr. Brooksbank has spent on producing these truly beautiful pictures. Nearly every bird dealt with in the text is represented by a photograph. There are 43 illustrations in full colour showing 58 species, and 71 black-and-white half-tones portraying 82 species.

There is a foreword by Viscount Chaplin, and a good general index as well as an index of Latin names of the birds.

The book is divided into five parts, namely : Waxbills, finches, and other seed-eaters ; parrots and parrot-like birds ; insectivorous, omnivorous, and nectar feeders ; doves and pigeons ; and the last section contains chapters on housing, general management, and diseases. It will, therefore, be seen that it is extremely comprehensive, and covers not only all the commoner kinds of foreign birds likely to come into the hands of the average aviculturist, but also a considerable number of the rarer species about which little information has hitherto been available.

D. H. S. R.

A GUIDE TO THE BIRDS OF CEYLON. By G. M. Henry, Illustrated by the author. Oxford University Press. London. Cumberlege, 1955. Price £2 2*s*. net.

This comprehensive and well presented book on the birds of Ceylon is not only a useful working handbook for the experienced ornithologist but is also excellent for the beginner for the author gives much useful

advice and explanation on the best means of observing birds, selection and care of field glasses, and so on.

In the introduction Mr. Henry states that serious study of the birdlife of Ceylon may be said to have commenced about a century ago and he gives a survey of the work that has been done and the books that have been published.

As is to be expected in a book by G. M. Henry it is profusely illustrated and the general principle adopted has been to depict the more colourful birds in colour and those of duller plumage by black and white drawings in the text. The author states that in the accounts of the species no attempt has been made to give exhaustive information and that the purpose of the book may be stated as the provision of a means of identifying birds in the field—mainly through the illustrations —and a framework of basic facts on which students may build their own observations. In this he succeeds admirably.

Mr. Henry has not adopted the new arrangement of Orders and Families which has now been generally accepted which is a pity, even though he mentions that the book is not intended as a work on classification and nomenclature but as a help towards " enjoying the birds."

There are no less than 30 coloured plates depicting 198 species, all of the high standard expected of G. M. Henry, and they are beautifully reproduced ; also a very large number of black and white illustrations and a map of Ceylon. The very reasonable price of the book makes it well worth obtaining for the coloured plates alone, and it certainly should have a wide demand.

P. B-S.

* * *

CORRESPONDENCE

BREEDING OF SALVADORI'S DUCK (*Anas waigiensis*) IN NEW GUINEA

I thought you would be glad to know that I have bred the Salvadori Duck, which must be for the first time, as nobody has them in captivity with the exception of myself ; I have twelve.

They live in small parties, being very pugnacious, and no other duck can show itself near the breeding pair. In this case the breeders are a trio, two females and a male. One duck has three babies, the other is still sitting. At this moment the youngsters are 3½ weeks old. They are almost black and white in colour. It was noted that they frequently travel on the mother's back whilst swimming in the lake. They are an unusual duck and will dive quite deeply if startled and break the surface 30 or 40 yards from where they dived.

I am glad to give you this first-hand information of what must be the first breeding of this rare duck.

EDWARD HALLSTROM.

462 WILLOUGHBY ROAD,
WILLOUGHBY, N.S.W.

(We hope Sir Edward Hallstrom will send further details of this first breeding with photographs for publication in the Magazine—ED.)

THE AVICULTURAL SOCIETY RECEIPTS AND PAYMENTS ACCOUNT

Year ended 31st December, 1955.

RECEIPTS

	£	s.	d.	£	s.	d.
To Balance at Bank, 1st January, 1955				715	5	11
„ Ordinary subscriptions						
Arrears	17	12	0			
Current	764	14	7			
In advance	102	2	2			
				884	8	9
„ Life membership subscriptions				60	1	6
„ Avicultural Society of America				62	10	7
„ Donations				113	1	5
„ Legacy				100	0	0
„ Sales of Magazines				37	14	6
„ Sales of *Australian Parrots*				21	10	5
„ Sales of *The Anatinae*				11	18	10
„ Sales of surplus books				230	5	9
„ Sales of waterfowl rings				14	7	10
„ Sales of coloured plates				25	4	6
„ Sales, Miscellaneous				1	16	0
„ Advertisements				9	15	11
„ Dividends				43	0	6
				£2.331	2	5

PAYMENTS

	£	s.	d.
By Printing of Magazine	1,149	1	5
„ Coloured plates	191	2	2
„ Authors' separates	18	9	3
„ Sundry printing and stationery	56	8	8
„ Printer's charges and expenses	9	3	1
„ Honorarium to Editor	100	0	0
„ Secretarial	52	0	0
„ Preparation of Index	10	10	0
„ Newman Library Insurance	2	5	0
„ Advertisements	15	0	0
„ Expenses at Council Meetings	7	2	0
„ Medals and engraving	17	19	9
„ Waterfowl Rings	23	11	6
„ Society's visit to Antwerp	10	5	1
„ Postages	28	17	10
„ Bank charges	1	0	2
„ Miscellaneous expenditure	8	14	0
	1,701	9	11
„ Balance at Bank, 31st December, 1955	629	12	6
	£2.331	2	5

I have examined the above Account with the books and vouchers of the Society and certify it to be in accordance therewith. I have verified the Bank Balance.

LONDON.
1st February, 1956.

J. WATKIN RICHARDS, *Certified Accountant.* } *Hon. Auditor.*

CANDIDATES FOR ELECTION

P. R. Abrahams, 2 Westow Hill, Upper Norwood, S.E. 19. Proposed by Miss K. Bonner.

Major H. J. Andrews, M.B.E., 7 The Byeways, Surbiton, Surrey. Proposed by Miss K. Bonner.

R. M. Andrews, Jr., 5 Shiba Park, Tokyo, Japan. Proposed by A. A. Prestwich.

J. M. Armstrong, 389 Upper Newtownards Road, Belfast, N. Ireland. Proposed by Sir Crawford McCullagh, Bart.

Mrs. P. M. Bailey, Swn-y-Wylan, Borth-y-Gest, Portmadoc, N. Wales. Proposed by A. A. Prestwich.

W. Bain, "Viewmount," Arduthie Road, Stonehaven, Kincardineshire, Scotland. Proposed by P. W. Teague.

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A. B. Barrett, Long Meade, Meldreth, Nr. Royston, Herts. Proposed by Miss K. Bonner.

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D. Berrow, 49 Enelestede Close, Handsworth Wood, Birmingham 20. Proposed by A. A. Prestwich.

F. Black, 95 Woodlands Road, Sparkhill, Birmingham 11. Proposed by Miss K. Bonner.

Dr. Benjamin D. Blood, Pan American Sanitary Bureau, Charcas 684, Buenos Aires, Argentina. Proposed by A. A. Prestwich.

A. J. Blum, P.O. Box 114, Mt. Healthy, Cincinnati 31, Ohio, U.S.A. Proposed by A. A. Prestwich.

F. Bond, Mountway Road, Bishops Hull, Taunton, Somerset. Proposed by Miss K. Bonner.

W. Booth, "Regat House," Lower Leigh Road, Daisy Hill, Westhoughton, Bolton, Lancs. Proposed by Miss K. Bonner.

J. Braithwaite, Garlands Hospital, Carlisle, Cumberland. Proposed by A. A. Prestwich.

A. R. Brearley, 54 Cambridge Street, St. Neots, Hunts. Proposed by Miss K. Bonner.

A. E. Briggs, 32 Thomas Street South, Hopwood Lane, Halifax, Yorks. Proposed by Miss K. Bonner.

L. M. Brown, Silver Street, Coningsby, Lincoln. Proposed by A. A. Prestwich.

Staveley Bulford, Manor House, East End Lane, Ditchling, Hassocks, Sussex. Proposed by A. A. Prestwich.

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C. Slater, 12 Moorland View, Gleadless, Sheffield 12. Proposed by Miss K. Bonner.
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Lyle Wickline, 6603 King Avenue, Bell, Calif., U.S.A. Proposed by Calvin Ragan.
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Mrs. P. K. Wolf, Hanstead House, Bricket Wood, nr. St. Albans, Herts. Proposed by Miss K. Bonner.
S. Woodhouse, 184 Jameson Avenue, Salisbury, Southern Rhodesia. Proposed by O. E. Clements.
D. P. Wyatt, 3518106. SAC., Block 36. T/W., R.A.F., Jever, B.A.O.R. 25, Germany. Proposed by Miss K. Bonner.

NEW MEMBERS

The twenty-three Candidates for Election in the January–February, 1956, number of the AVICULTURAL MAGAZINE were duly elected members of the Society.

READMITTED

J. RODGERS, 39 Fore Street, Totnes, Devon.

CHANGES OF ADDRESS

H. J. BATES, to 4146 Pacific Coast Highway, Walteria, Calif., U.S.A.
D. BEAN, to 46 Argyll Street, Corby, Northants.
Miss D. I. CAFFERTY, to 662 Wellington Avenue, Chicago 14, Ill., U.S.A.
D. B. HALL, to 3 Rowdeford Cottages, St. Edith's Marsh, Bromham, Wilts.
ANTHONY JACK, to Avenida da Liberdade 192, Lisbon, Portugal.
IVO LAZZERONI, to 524 South Dancove Drive, West Covina, Calif., U.S.A.
Miss A. REED, to Apt. 10, Queen's Court, 581 Jarvis Street, Toronto, Ontario, Canada.
C. T. RIDLEY, to Birdwarren Farm, Box 217, Varsity View P.O., Charleswood, Manitoba, Canada.
Mrs. V. RYCROFT, to 8 The Mead, Cirencester, Glos.
H. A. STAPLES, to 461 East Sacremento Avenue, Chico, Calif., U.S.A.

AMENDED NAMES AND ADDRESSES

R. A. NEWLAND, 93 Arne Avenue, Parkstone, Poole, Dorset.
P. W. TEAGUE, Rowlestone, Southdowns Road, Dawlish, Devon.
H. TEMLETT, Doves Rest, P.O. Box 37, Maseru, Basutoland, South Africa.

DONATIONS

(Coloured Plate Fund)

	£	s.	d.
G. D. LAKE . . .	3	3	0
A. LAMB . . .	2	2	0
F. E. B. JOHNSON . .	1	0	0

UNIDENTIFIED MONEY ORDERS

Belgium
Schaerbeek, No. 5 (1955).
Antwerpen 1, No. 284.
Hamme (VI), No. 8.

Holland
Amersfoort, No. 202.

U.S.A.
Brookfield, Ill., No. 7-243605.
Seattle, Wash., Greenwood Sta., No. 12-627,067.

MEMBERS' ADVERTISEMENTS

The charge for Members' advertisements is ONE PENNY PER WORD. *Payment must accompany the advertisement, which must be sent on or before the 15th of the month to* A. A. PRESTWICH, 61 CHASE ROAD, OAKWOOD, N. 14. *All members of the Society are entitled to use this column, but the Council reserves the right to refuse any advertisements they consider unsuitable.*

WANTED

Urgently, hen Bob White Quail.—D. B. HALL, Rowdeford School, Devizes, Wilts.

Aviculture, vols. i–iii.—WALTER STONE, Detroit Zoological Park, Royal Oak, Michigan, U.S.A.

Tavistock, *Parrots and Parrot-like Birds in Aviculture*, 1929 edition.—RAY THOMAS, 600 Sarbonne Road, Bel-Air, Los Angeles 24, California, U.S.A.

AVICULTURAL MAGAZINE, Vol. I, 1894–95; Vol. III, 1896–97. Third series, Vol. X, 1918–19, part 8 or complete; vol. XII, 1921, part 5 or complete. Fourth series, Vol. I, 1923, parts 1, 2, 3 or complete; Vol. II, 1924, part 2 or complete; Vol. III, 1925, complete; Vol. V, 1927, parts 1 to 8 or complete. All complete with coloured plates.

Foreign Birds, vol. i, 1935, vol. ii, 1936, vol. iii, 1937, vol. xv, 1949, vol. xvii, 1951.

Catalogue of the Birds of the British Museum, vol. i, ii, iii, iv, v, xxi.—C. AF ENEHJELM, Högholmens Djurgård, Helsingfors, Finland.

FOR SALE

What offers for 60 copies of AVICULTURAL MAGAZINE from January, 1947, to December, 1955, complete—as new—any reasonable offer accepted.—Hon. Mrs. G. BOURKE, Rotherend, Rotherfield Road, Henley-on-Thames.

A colony of Black-headed Conures, comprising a breeding pair together with their 1954 young one and three 1955 young. £45 the six birds.—A. A. Prestwich, 61 Chase Road, Oakwood, London, N. 14.

Cock-o-the-Rocks, one true pair of the extremely rare Scarlet (*Rupicola sanquinolenta*). Also a rebound, as new, copy of the *Monograph of Sun Birds*, by Shelley.—Prices and particulars, P. H. HASTINGS, 182 Sultan Road, Portsmouth, England. Phone 4272.

Books in exchange for Binoculars.—Cassell's *Canaries and Cage Birds* (leather bindings). Cassell's *Book of Birds* (4 vols.). Houlton's *Cage-bird Hybrids*. Naturalist's Library.—*Humming Birds* (2 vols., 1833), *Birds of West Africa* (1837). Miscellany of Natural History.—*Parrots* (1833), Russ's *Speaking Parrots*, Lyell's *Fancy Pigeons* (1881), Tegetmeier's *Pheasants* (3rd ed.), Barton's *Pheasants* (1912), Doyle's *Domestic Poultry* (oil colours).—W. FERRIER BROWN, 85 Yew Tree Road, Southborough, Tunbridge Wells.

Young Indian Ring-neck cock; what offers for, or would exchange budgerigars or waterfowl.—MARK VINSON, Beeches Farm, Cowden, Kent.

STEPHEN AUSTIN AND SONS, LTD., PRINTERS, HERTFORD.